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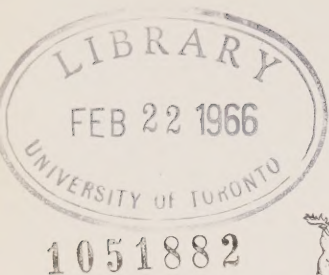
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ONTARIO HYDRO NEWS JANUARY 1959





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ONTARIO HYDRO NEWS

JANUARY, 1959

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COVER "SHOTS"

Symbolic of the month of January, the two-headed Roman god, Janus, on this month's covers, looks to the past and to the future represented by two types of power generation—hydraulic and thermal-electric (see "Highlights of '58, page 2.)

A STANDING CHALLENGE

AT this season of the year it is customary, and, we feel, quite appropriate to review briefly certain events and achievements in which all associated with Ontario's province-wide Hydro enterprise can take genuine pride.

It is not difficult to find refreshing evidence of substantial growth or the reasons for such expansion. Moreover, it is equally gratifying to note many examples of the impact of this expansion on the general economy of this province. In presenting a brief to The Committee on the Organization of Government in Ontario last November, Chairman James S. Duncan pointed out that Ontario Hydro, between 1946 and 1957, spent approximately \$1.6 billion on new generation, transmission and transformation facilities. Between 1950 and the end of 1957 the municipal utilities spent a total of more than \$191 million on extending their facilities.

Undoubtedly this healthy rate of expansion has had a profound effect on employment levels and the tempo of operations among the numerous Canadian industries which supply Ontario's electrical utilities with the required equipment and materials for such widespread programs of expansion. Ontario Hydro's purchases, for example, totalled almost \$200 million between January, 1957, and June, 1958. More than 83 per cent of the orders went to Canadian firms; 8.59 per cent were placed with U.S. companies; 7.44 per cent went to the United Kingdom, while 0.33 per cent represented imports from other countries.

By the end of 1957, some 98 per cent of the 1,410,000 dwellings in Ontario were electrified. At the same time, Ontario Hydro and its partner municipalities were serving some 1½ million customers.

In the brief mentioned above, Mr. Duncan also drew attention to the fact that per capita consumption of electricity in Ontario is among the highest in the world, amounting to 5,533 kilowatt-hours in 1957—compared to 5,199 kw-hrs. for Canada as a whole and 4,233 for the United States. He attributed this to "the high standard of living and the remarkably low cost of electricity to the consumer."

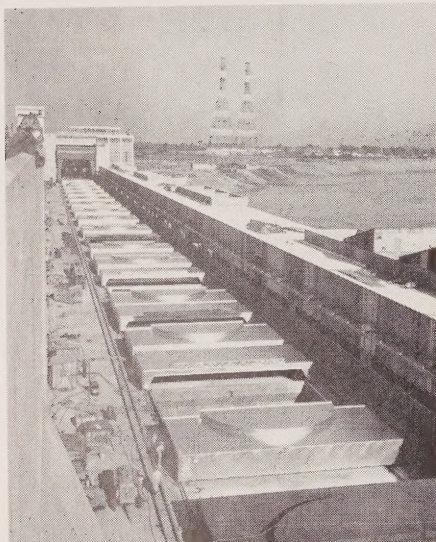
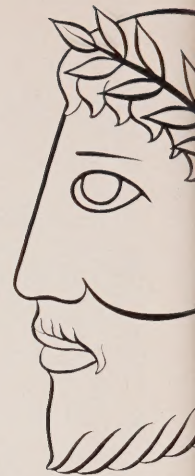
As we stand at the beginning of another year, we do so in the proud realization that the actual service area of Ontario Hydro is possibly greater than that of any other utility in the world, while its fixed assets of more than \$2 billion place it first among North America's electrical utilities in this respect.

While such a pre-eminent position is a source of satisfaction, it also stands as a challenge for renewed enthusiasm and vigilance in extending and improving the scope and quality of Hydro service throughout Ontario.



MORE than 100,000 sparkling lights at Toronto's Canadian National Exhibition grounds greeted countless hundreds of Queen City sightseers during the recent Christmas season. They were part of the unique "Christmas Showcase", sponsored by the Kiwanis Club of Toronto, which provided commercial and industrial firms with a new means of extending seasonal greetings. The displays formed an avenue of light almost one-half mile long, and utilized more than one million watts of electricity.

HIGHLIGHTS OF '58



VIEW of the downstream deck of the St. Lawrence powerhouse looking to the Canadian shore.

ALTHOUGH 1958 may be recognized officially in Ontario Hydro annals as "St. Lawrence Year", it's also regarded as significant for several other well-founded reasons.

First—more new generating capacity was added to the Commission's system than in any other year. Completion of the major Sir Adam Beck-Niagara Generating Station No. 2 and the associated pumping-generating station — installation of seven of the 16 generating units at the Robert H. Saunders—St. Lawrence Generating Station, together with new stations and additions to existing plants in northwestern Ontario combined to augment generating capacity by more than 800,000 kilowatts. By the end of the year Hydro's total resources stood at more than 5,761,000 kw.

On the other side of Hydro's "ledger", an accelerated tempo in several phases of industrial and commercial enterprise during the latter part of 1958, coupled with increased domestic electrical requirements, were reflected in all-time high peak and energy demands during December last year. Preliminary figures indicate that the Commission's Southern Ontario System registered a new record on December 16, 1958, when peak demands reached a total of 4,273,000 kw. This represented an increase of 9 per cent over the 1957 figure or some 3 per cent more than the long-term average load growth of 6 per cent a year.

While 1958 was significant for soaring power demands in the latter part of the year and impressive increases in resources, the announcement of far-reaching plans for future expansion and important technical studies gave the last 12 months added lustre.

To name but a few:

On February 3, 1958, it was announced that construction of the 20,000-kw. Nuclear Power Demonstration (NPD) plant on the Ottawa River would be resumed. Work on this "pilot" nuclear-electric station was suspended in April, 1957, to incorporate design improvements. Ontario Hydro also stated that it would continue to participate in the design and development



FOUR KEY international figures (left to right): Chairman Robert Moses, Power Authority of the State of New York; Governor Averell Harriman, Ontario's Prime Minister Leslie Frost and Ontario Hydro Chairman James S. Duncan joined hands during the St. Lawrence inauguration ceremonies.



AND A LOOK AT 1959

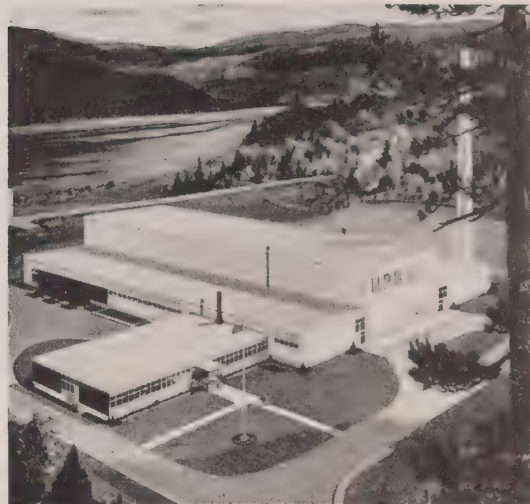
phase of a full-scale nuclear-electric plant. It is presently envisaged that the first unit of this plant, (which will be fueled by natural uranium, and cooled and moderated by heavy water) will be in the 200,000-kw. range. The Commission has assigned an engineering team to the Nuclear Power Plant Division, which was established in 1958 by Atomic Energy of Canada Limited to direct and co-ordinate these two projects. The new Division has been provided with accommodation at the Commission's A. W. Manby Service Centre near Toronto.

While directing its attention to the possibilities of nuclear energy, the Commission was also giving equal consideration to the possibilities of expanding its hydro-electric resources. It is estimated that an additional 1.8 million kw. are available for economic development. Early in February last year, Ontario's Prime Minister, Hon. Leslie M. Frost, and Ontario Hydro Chairman James S. Duncan announced two initial steps in a long-range plan to develop additional hydraulic sites in northeastern Ontario. Under this plan, Ontario Hydro initiated immediate construction of Red Rock Falls Generating Station on the Mississagi River, as well as Otter Rapids G.S on the Abitibi River. Capacity of the Red Rock Falls plant, which is tentatively scheduled for initial operation late in 1960, is expected to be about 38,000 kw. Initial power from the Otter Rapids plant, which is expected to have a capacity of 131,000 kw., is anticipated in 1961.

Voltage Studies

In conjunction with this decision to proceed with development of northern hydraulic sites, the Commission announced plans for a two-year study of extra-high-voltage transmission methods. This study will entail the construction of an experimental line, approximately one mile long, in the vicinity of Coldwater, near Orillia, Ont. The test line will be used to conduct experiments at voltages up to 600,000, although it is anticipated that 380,000 volts or 460,000 volts will prove to be best suited to Commission requirements.

(Continued on page 4)



CONSTRUCTION of the Nuclear Power Demonstration (NPD) plant on Commission-owned land near Des Joachims G.S. on the Ottawa River was resumed during 1958.



MEANWHILE installation of four additional units was proceeding at the thermal-electric Richard L. Hearn Station in Toronto. Two of the units will start operation in 1959.

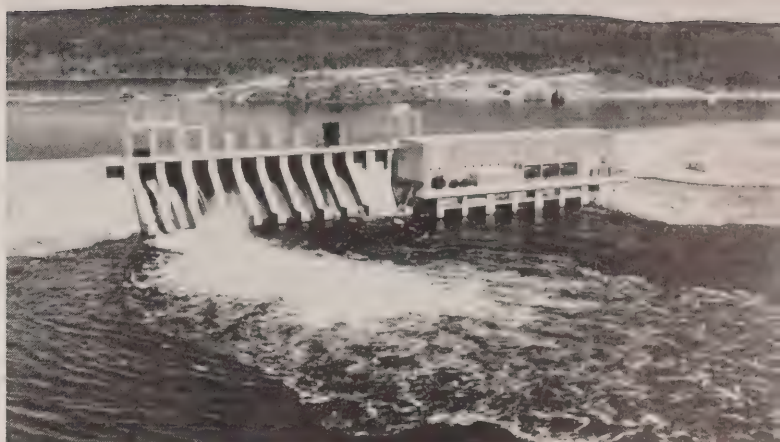


COMPLETION of the Sir Adam Beck-Niagara Generating Station No. 2 (left foreground) and the pumping generating station (upper left) was another significant achievement of 1958.





INSTALLATION of a fifth unit at Manitou Falls G.S. on the English River was completed during 1958 thus raising the capacity of this radio-controlled station to 65,700 kilowatts.



ANOTHER English River development, the Caribou Falls plant was completed in October, 1958, augmenting the resources of Ontario Hydro's power-hungry Northwestern Division by 67,500 kilowatts.

The maximum transmission voltage now used by Hydro is 230,000 volts, and the studies are expected to furnish extensive data for the design of E.H.V. systems that will permit more economical transmission of power from stations in remote sections of the province.

Comparable in international significance with the official opening of the joint St. Lawrence Power Project was the early-December inauguration of an Ontario Hydro connection with the electrical system of its St. Lawrence partner, the Power Authority of the State of New York.

This interconnection was facilitated by the relocation of transmission lines in 1955 to maintain an existing connection with the Niagara Mohawk Power Corporation system in New York State, and to supply additional power for St. Lawrence Project construction purposes.

Provision was made at that time for the eventual Ontario Hydro—PASNY interconnection. Construction of these circuits necessitated the erection of giant, 335-foot high towers (the highest in the Commission's transmission system) on either side of the St. Lawrence River to carry the lines across a 3,300-foot span.

Coincident with this latest international tie-in was the complete integration of the Ontario Hydro—Hydro Quebec systems through the facilities of Hydro's new St. Lawrence Transformer Station near Cornwall.

These 1958 system connections created one of the world's largest power networks extending over an area of more than ½ million square miles, and including the States of New York, Michigan and those of New England. Electrical utilities participating will share a power pool of 26 million kilowatts.

Looking at 1959, the construction envisaged for the coming year embraces hundreds of widely diversified projects ranging from rural extensions to large-scale hydraulic and thermal generating projects.

Thus present plans call for a total capital expenditure of approximately \$200 million this year—a figure consistent with the level of expenditures prevailing for several years.

While the great bulk of the work associated with the St. Lawrence Power Project has already been completed, this vast undertaking will continue to constitute a major feature of the work program during 1959. Seven of the 16 units in the Robert H. Saunders-St. Lawrence Generating Station were in operation by the end of the year, and the remainder will be brought into service, progressively, from January until November, 1959.

Thermal-Electric Plants

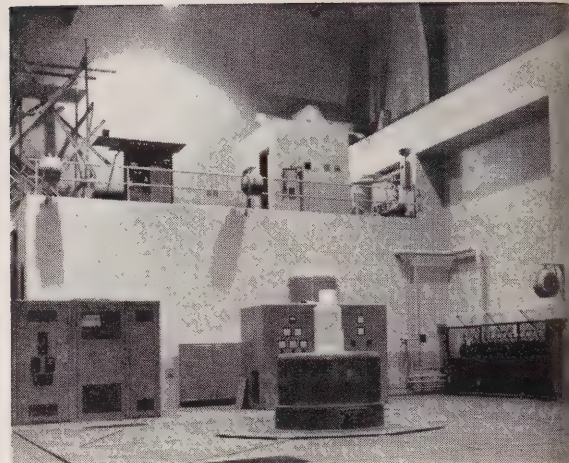
System expansion elsewhere in southern Ontario will be confined to thermal-electric developments. Early in the new year, unit No. 5 will be brought into service at the Richard L. Hearn G.S. in Toronto. This 200,000-kilowatt unit will raise the capacity of the station to 600,000 kilowatts. A second unit of similar size is scheduled for operation later in the year. Steel erection and other work in connection with units No. 7 and No. 8 will also be carried out during 1959. Upon completion in 1960, the plant will have a capacity of 1,200,000 kilowatts.

Plans have also been announced for the construction of two coal-fired plants in the Toronto-Hamilton area, which will be among the largest in the world. Lakeview

(Continued on page 6)



HYDRO'S picturesque 53,700-kw. Whitedog Falls plant on the Winnipeg River, some 30 miles northwest of Kenora, was also completed last year.



INTERIOR VIEW of the Cameron Falls plant on the Nipigon River where a 19,100-kw. unit was completed.

Generating Station, the first of these plants, will be built west of Toronto. It is being designed for an ultimate capacity of 1,800,000 kilowatts.

Rock excavation in the powerhouse area will commence in the spring of 1959. Foundation work and steel erection in connection with the first two units will commence in the summer of 1959. The first of the 300,000-kilowatt units is scheduled for service late in 1961 and the second will follow in 1962. Already most major items of equipment have been purchased.

Details of the second plant have not been completed although it is expected to be of comparable size.

Northern Ontario will again figure prominently in the Commission's work program during 1959. Operating conditions indicate the need for supplementary thermal-electric facilities in northwestern Ontario, and a coal-fired plant is presently being constructed at Fort William. Known as the Thunder Bay Generating Station, it will have an initial capacity of 100,000 kilowatts, at a cost of \$26 million, with provision for enlargement to one million kilowatts as required.

In the coming year, work will concentrate on dock facilities, excavation and initial steel erection. Power from the Thunder Bay plant is expected to be available late in 1961.

Hydraulic Projects

Meanwhile work is continuing at several hydraulic projects in the north. The 45,500-kilowatt Silver Falls development on the Kaministiquia River, near Port Arthur, will be completed early next fall. During the next few months work will centre on tunnel lining and the placing of concrete at the powerhouse.

In northeastern Ontario a good start has been made at the site of the Red Rock Falls development. Work

on the powerhouse site will be under way early in the new year.

Hydro forces have established a construction camp at Otter Rapids, and active construction will commence with the spring breakup. The installation of a fifth unit at the Commission's Abitibi Canyon Generating Station on the same river will be completed early in 1959. The unit will augment resources by 45,000 kilowatts.

Rural Program

The Commission's rural construction program constitutes another major phase of its 1959 expansion plans. This year, rural electrification will entail an expenditure of \$22,158,000 on new distribution lines and associated facilities, street lighting, line relocation and operational improvements.

The 1959 program includes construction of 1,050 miles of new line to serve 5,747 additional customers, while present plans call for the addition of 22,910 customers to existing lines.

One of the most significant events in the Commission's history will be marked sometime toward mid-summer, 1959, when the last changeover will be carried out in connection with the Frequency Standardization program. In scope and application, this program surpasses any similar project ever undertaken anywhere in the world. It is now estimated that nearly seven million frequency-sensitive items, belonging to more than a million customers, will have been changed from 25-cycle to 60-cycle operation by the end of the 10-year program. For the greater part, electric supply facilities throughout North America will then be standardized at 60 cycles.

The long-range plans of Ontario Hydro provide for a doubling in power demands every 10 to 11 years. Progress during 1959 will be in keeping with this goal. ■



△ ALEXANDER GENERATING STATION, also on the Nipigon River, where an additional unit commenced operation in April last year. The plant now has a total capacity of 60,900 kw.

ONTARIO HYDRO construction forces established a "beach-head" at the Otter Rapids site on the Abitibi River (shown below) and at the Red Rock Falls development where a second Mississagi River plant is underway.



JANUARY, 1959

NET PROFITS

Lake Erie's co-operative fishermen are reaping piscatorial prizes these days with the aid of electricity

by Horace Brown

THE sky and water blend, then dissolve in a shower of shimmering spray. The 65-foot steel fishing-tug—bucking broncho of the marine world—yaws violently, waggles its stern like an emerging duck, then flings its bobbing bow into the sharp crest of the advancing wave. As the fishing-nets, glistening with spray of water and spiked with wriggling fish, are hauled in from the depths of Lake Erie, the uninitiated feels as though he is riding a combination of roller-coaster and whip. It is no consolation to learn later that veteran skippers of ocean-liners have been known to become violently seasick while taking a supposed "busman's holiday" aboard in Erie fishing-tug.

The neophyte is also confounded by the fact that the crew of the fishing-tug goes about its work as though the world were still as flat as people believed before Columbus discovered America.

"Well," gasped a whitefaced, would-be mariner, as he staggered

gratefully ashore from a "friendly" trip, "it's a way to earn a living. And you can have it!"

Hundreds of hardy men, sea-dogs of the inland waters known as the Great Lakes, not only take it, but are glad to devote their lives to the hard work and dangers of a daily adventure, where excitement becomes routine. They are usually quite young when they start and reluctant to give up when they are old. It is a life that grips and holds, in spite of the "beefs" that, like sailors all over the world, they are only too ready to voice.

For some 200 days of the year, the commercial fishermen of Lake Erie set out in their tugs to net the produce of their "sea" for the hungry city markets of Canada and the United States. They are at the mercy of wind and weather and the vagaries of the fish population.

For years, the Erie fishermen had lived on the bare edge of subsistence. Competition was keen,

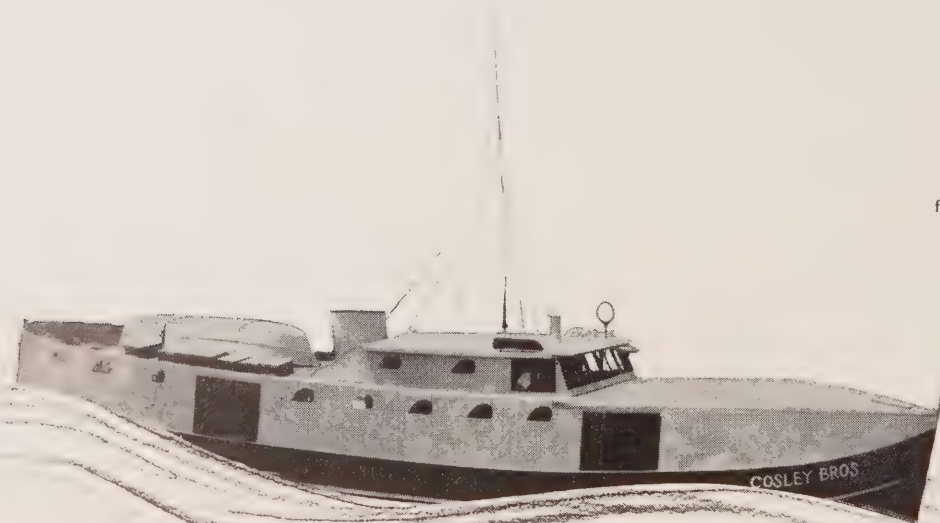
catches sporadic, markets uncertain. A high initial investment made ownership and operation of a fishing-tug a gamble on a par with buying a sweepstake ticket. Any accident or breakdown could wipe out a season's narrow profits, with all the attendant hard work and heartache. The competition was so ruinous that the catch was sacrificed at times for a few cents a pound.

One man, a boat-owner, was well aware of these problems, and the fact that the fishing-tugs were racing one another to extinction. Cecil (Cec.) Martin, is quiet, slim and bespectacled, yet among tough Lake captains he is a noted fishing skipper. He is also the type of man to do something about such a situation.

Every Owner Eligible

What Cec. Martin "did about it" is today good news all up and down the shores of Lake Erie, and over into Lakes Huron and Superior. In 1949, he called a meeting of the

(Continued on page 10)



"COSLEY BROS."—a typical all-steel fishing craft—has topped all catches recorded by Port Dover commercial fishermen in the past two years.



△ CECIL MARTIN, a noted Lake Erie fishing skipper and father of the Ontario Fishermen's Co-operative Ltd., examines one of his nets drying on a Port Dover dock.



ABOARD the "Cosley Bros." two crewmen, Eddie Mummery (left) and Bud Parker haul in a "catch" with the help of the mechanical "net-puller".





IN THE EAST ERIE Fishermen's Co-operative Limited plant, Arthur Secord uses an electric hand-scaler on two hefty pickerel.

Although Port Dover is said to have the largest continuing fresh-water fishing fleet in the world, the co-operative principle has spread to other ports on the Great Lakes. Associated fish-processing plants are operated at many centres, and the value to the members of the fishing co-operatives in Ontario is computed at about \$5 million annually.

Ontario's Department of Lands and Forests estimates that the commercial fishing tally for 1957 reached 50,301,000 lbs., with Lake Erie commercial fishermen accounting for 75 per cent of the provincial catches of pickerel and perch. Lake Erie's production totalled 36,780,000 lbs. valued at \$4,500,000. According to departmental estimates, the 1957 perch landings on Lake Erie increased by 23 per cent over 1956 to 11,951,000 lbs., while the lake also yielded more than 4,200,000 lbs. of smelt—an increase of 25 per cent over the previous year.

Fairer Return

In the nine years of co-operative effort at Port Dover, pride of craft has been restored. While the work is still iron-hard and the catch often uncertain, the fisherfolk of the area are securing a fairer return for their investments of time and money. Importantly, the quality of the fish has improved notably, so that the product is now in demand in hitherto closed markets. The co-operatives readily give the credit for the maintenance of a fresher, firmer, altogether better fish to the "powers" of electricity.

"Top boat" in the fleet for the past two years by virtue of its catches, "Cosley Bros.," is still typical of the all-steel fishing craft that ply the inland waters. Owned by the brothers Stanton, Paul and Peter Cosley, the boat and gear represent an investment of some \$40,000.

Like other boats in the fleet, the "Cosley Bros." is worked on "shares". The owners take 60 per cent, the crew divides the remainder. For each crew member this

fishing-tug owners, and presented a plan for forming a fishermen's co-operative. Every boat-owner would be eligible, and he would put in only such an amount as he could afford.

The idea spread like a long wave throughout the ports of Dover, Nanticoke, Burwell, and Maitland. Boats sailed into the sheltering bay of mutual interest, and today, almost a decade later, the Ontario Fishermen's Co-operative, with headquarters at Port Dover, has its flag on 40 owner-operated fishing-tugs, giving steady employment to some 250 fishermen. This "co-operative" has sired two lusty offspring, which, as is common today, have grown bigger than the parent. East Erie Fishermen's Co-operative Limited is a processing, packaging and freezing operation, while the Dover

Fishermen's Co-operative Limited prepares fish for the fresh market trade. The combined plants, which depend on electricity to turn the fleet's "net take" into "net profits", have a daily capacity of 35,000 lbs. of fish. They can freeze up to 20 tons of fish in a day, and can store 100 tons in their freezers. Also associated are the Port Maitland Fishermen's Co-operative Limited and Jackson Bros. of Nanticoke.

The parent body operates a supply house at Port Dover from which the boats of the fleet purchase gear to the annual tune of some \$7,000 each, keeping the profits within the "family". All told the Port Dover "co-ops" had a combined sale in 1957 of more than \$1,500,000, with each co-operating boat sharing in the profits.

means some \$3,000 to \$4,000 annually, for an eight-to-ten hour workday, 200 days a year, in all kinds of weather. This wage-catch is a signal advance over the meagre "pre-co-op" times, when it was every man for himself, and little or nothing left for the unlucky.

The work of the crew is steady and relentless, however, for it takes split-second timing and teamwork, particularly when Lake Erie is blowing up a breeze. About three miles of net are set in 11 fathoms (66 feet) of water, with each length of net spaced by buoys, and decked with the flags of the boat to which it belongs. Lake fishermen must anticipate the possibility that the nets will be fouled by deep-riding freighters, thrown off course by northeast or northwest winds. This is only one of the many hazards common to commercial fishing but the crews shrug their shoulders against bad luck, and go back again in search of the piscatorial prizes. The crew of the "Cosley Bros.", for instance, has been together for six years, and watching these men at work reminds the observer of a championship team in operation: each man knows his job and what to expect from his mate.

The boat's average daily catch of fish is 1,500 lbs., but as high as four tons have been netted in one day. Fish caught include whitefish, blue and yellow pickerel, herring, lake bass, smelt and perch. Sturgeon got quite a play on Lake Erie 20 years ago, then disappeared. A small run began a couple of years ago, but no trend was indicated, and no sturgeon have been caught since. Similarly, herring, once the most numerous, have not had a real "run" since 1946, although some fishermen profess to see signs of the herring's return. Whitefish are becoming increasingly scarce, perhaps because of the lamprey eel, and, with the larger fish disappearing, the smelt have become so abundant as to constitute something of a problem. These small fish become "bridled" in the nets, and fishermen will move

(Continued on page 17)



MANAGER Don Pentz, East Erie Co-operative Ltd. (left), examines the quality of fish being weighed and packed by Jack Dosser before they are placed in the "quick-freezing" room.

FISH in 12-ounce consumer packages are put through the "overwrap" machine by Eleanor Kruger (right) while Barbara Gibbons places the packages on a tray for "plate-freezing".



by Don Wright

AERIAL VIEW of the original Woodstock Transformer Station—a familiar landmark since 1910. The obsolete plant and equipment have now been dismantled and replaced by a new installation—with the outdoor look!



THE OUTDOOR LOOK

In Transformer Stations

TWO Hydro “veterans”, with service records dating from the earliest days of the Commission, recently retired.

The old-timers, in this instance, were the Woodstock and Toronto-Strachan Transformer Stations. The end of their long and faithful service was brought about by inadequacy and obsolescence, fortuitously coinciding with Hydro’s vast frequency standardization program.

A familiar landmark since 1910, the year Hydro delivered first power to several of the original 14 communities in southern Ontario, the Woodstock station has been completely dismantled. It has been replaced on the original site by a contemporary structure of radically different design and increased capacity.

Tenders for the original Woodstock station were called, July 14, 1909, along with those for similar installations at London, Guelph, Preston, Kitchener, Stratford, St. Marys, St. Thomas and Toronto.

Just a few weeks earlier, contractors had been invited to bid for the job of building transformer stations at Niagara Falls and Dundas. Power from the Ontario Power Company’s generating station at Niagara Falls was stepped up for transmission at 110,000 (now 115,000) volts (an unusually high voltage at that time), and lines radiated from Dundas to the other transformer stations. With the exception of the Woodstock and Toronto stations, and Preston, which has since been replaced by Galt T.S., these stations are still in service although they bear little resemblance to the original installations.

In the most modern transformer stations, where the low voltage is 13 kv or greater, only the control and relay equipment is still housed indoors. Installation of heavier capacity outdoor equipment has been carried out progressively at all of Hydro’s original stations in recent years. The process of changing over from 25- to 60-cycle operation afforded a natural opportunity to press on with this work.

The almost continuous revision of facilities at these transformer stations reflects the astonishing growth in the demand for electricity, which has been experienced almost from the time the embryo southern Ontario grid first went into service. The total transformer capacity of the original Woodstock station—provided by a bank of three, single-phase, water-cooled transformers—was 2,250 kva—a capacity once deemed sufficient to meet the requirements of Ingersoll, Tillsonburg and the surrounding areas, as well as Woodstock itself.

By comparison, the new station includes two banks of three single-phase units with a combined capacity of 63,000 kva. A three-phase transformer, rated at 41,000 kva, will automatically switch into service should either bank trip out. Designed to meet future as well as present requirements, the new Woodstock station is expected to carry an initial load of approximately 35,000 kilowatts. By 1966, the station may have to meet requirements in the

Venerable Woodstock and Toronto

buildings go into retirement



CONSTRUCTION of the new Woodstock T.S. underway at Southside Park. The new equipment was placed in service late last year.



AFTER NEARLY a half-century of service, the old Toronto-Strachan T.S. building stands forlorn and empty. Exemplifying the trend toward outdoor installations is the modern, 60-cycle equipment visible on the left.



"IF you want 'lectricity so bad—run a comb through your hair!"

Electric Light and Power.

neighborhood of 55,000 kilowatts.

The history of the Toronto-Strachan Transformer Station similarly reflects the dynamic growth of the city it was designed to serve. but the drama behind almost a half-century of service cannot be conveyed by performance figures alone. This will be found among the yellowing pages of old Ontario Hydro files, which include numerous memos to Colonel Sir Adam Beck, first Chairman of the Commission, from Chief Engineer F. A. Gaby, and other correspondence originated by key Commission representatives in those early years.

These dispatches deal with problems ranging from the knotty question of obtaining an adequate water supply for cooling purposes, to finding a means of maintaining the tennis courts (in the face of expanding station requirements) on the limited property leased from the City of Toronto on the Garrison Commons.

Entire Toronto Load

When it was built, the Strachan station was able to handle Ontario Hydro's entire Toronto load with transformer equipment consisting of two banks of 1,250 kva transformers. In contrast, the capacity of the new transformer installation is in the neighborhood of 200,000 kva and the load is approximately 90,000 kilowatts, allowing for an outage of half the transformer capacity. Even this represents only a portion of Toronto's requirements, which reached a peak of 569,100 kilowatts in December, 1958, and are now supplied by eight transformer stations in addition to Strachan.

The 60-cycle load in the Strachan Avenue area has been steadily increasing since 1952 when an advance supply of power at the higher fre-

quency was made available, and most of the necessary equipment was installed outdoors. The final transition was effected during subsequent frequency standardization work, and with the new outdoor look, the Toronto-Strachan station now includes the most modern and up-to-date equipment available.

A similar renovation process has been carried out at Toronto-Bridgeman T.S., which was purchased from the Toronto Power Company. While the original station was even older than Strachan or Woodstock, its Hydro service was shorter.

Transformer capacity at the Strachan Avenue Transformer Station is made up of two banks of 66,600 kva transformers and two banks of 33,300 kva transformers. Operation is by remote control from the A. W. Manby Transformer Station (on Toronto's western outskirts), and to facilitate the construction of the Lakeshore Expressway, the power lines which supply the station were placed underground between the Humber River and Strachan Avenue. It was in this section that the revolutionary new cable-cooling technique (see Ontario Hydro News-October, 1957), developed by Hydro Research and Engineering Divisions to increase the current-carrying potential of underground installations, was employed for the first time.

While final disposition of the Strachan station building has not yet been determined, it has been declared surplus and will likely be sold. Thus must the old make way for the new. But Woodstock and Toronto-Strachan will be remembered with pride by hundreds of Hydro personnel, who, at one time or another, have been associated with their construction, operation or maintenance. ■

HIGHWAY IN THE SKY

by Robert McDonell



BURLINGTON BAY reflects the lights of Ontario's new Skyway. The \$19,000,000 structure is more than double the length of the Ambassador Bridge at Windsor.

Canadian Comstock Company
Photo).

AERIAL VIEW of the new Skyway and its approaches which cover an approximate distance of 8,700 feet.

(Ontario Department of Highways
Photo).



A NEW highway in the sky has eliminated a major bottleneck on one of Canada's busiest roads.

Soaring over the harbor entrance at Hamilton, Ontario's impressive Burlington Bay Skyway has replaced the only two-lane section of the province's four-lane Queen Elizabeth Way.

The Skyway's 4½ miles of elevated roadbed and approaches have given it the distinction of being Can-

ada's longest highway structure and certainly the largest in Ontario's history. But even more important for motorists travelling between Toronto and Niagara Falls, it means the last of the traffic "tie-ups" in the Burlington-Hamilton Beaches area. The problem was particularly acute during the navigation season when a bascule-type bridge over the Burlington Ship Canal was raised for freighters and other large craft entering or leaving Hamilton harbor.

For Ontario's Department of Highways the new Skyway represents an experimental venture into highway toll structures.

Officiating at the inauguration of the Skyway, Prime Minister Leslie M. Frost stated that it was one phase of a special \$100-million program destined to effect important improvements in Ontario's highway network. The toll system was devised, he continued, to raise the highway standards of the province without placing an excessive burden on the taxpayer. Much of the revenue from the Skyway will come, it is expected, from the 6,000,000 U.S. and other tourists, who use Ontario highways each year.

From a physical standpoint, the new elevated road is an impressive structure, 8,400 feet in length, exclusive of approaches. It towers to a maximum height of 210 feet. The deck of the bridge incorporates two, 24-foot roadways, with 10-inch curbs separated by a six-foot open steel grating designed to facilitate the removal of snow. In addition, parking bays have been provided for the convenience of maintenance crews and stranded motorists.

Impressive Lighting

If the structure is impressive by daylight, it becomes a veritable

fairyland at dusk when 136 fixtures, furnish a brilliance that is visible for miles.

Choosing a suitable method of lighting presented a number of problems, particularly in the design of an architecturally acceptable light standard able to withstand the wind velocities and vibration encountered some 150 feet above water level. Aluminum poles with a slip-on fitter were used to hold the twin, six-foot luminaires approximately six feet from the poles. Each luminaire is fitted with four, 100-watt lamps. There are 64 standards on the bridge proper and four on the approaches spaced 150 feet apart. The lighting is turned on and off automatically, controlled by an electric-eye mechanism.

The Skyway passes over an area steeped in the history of Upper Canada. Long before the arrival of the white man, Burlington Beach was a stopping-place for the Iroquois tribes on their forage trips from their northern New York villages into the lands of their enemies, the Hurons and Algonquins. It was here that Lasalle, the first white man to visit the area, stopped in 1669 to try to persuade the Indians to guide him further inland in search of the "Northwest Passage". In this vicinity, too, a supply headquarters was established for the armies of General Sir Isaac Brock, who, some 40 miles away, halted the American invasion of Canada. In recent years the "Beach" has been a popular summer resort for thousands of Canadians.

A marvelous feat of Canadian engineering, the new "Highway in the Sky" takes its place in Ontario's rapidly expanding highway system. ■



◁ WORKMAN examines one of the 136 fluorescent luminaires for the Skyway, which now provides one of Canada's most impressive lighting displays.

(Canadian Westinghouse Company Photo).

FORM SALES PROMOTION DEPARTMENT

ANOTHER far-reaching step in the joint, Ontario Hydro-municipal utility "Live Better Electrically" program has been announced by the Commission.

Designed primarily to assist every segment of the Hydro enterprise to more effectively meet the increased competition from other forms of energy, a new Sales Promotion Department has been established within the framework of the Consumer Service Division. This recently-formed organization—headed by W. R. Harmer, the Division's former Assistant Director—will be responsible for planning, developing and co-ordinating all activities for promoting customer use of electric energy throughout most of the province.

In carrying out this function, the Sales Promotion staff will provide leadership and assistance to the municipal utilities in setting up their own sales organizations and subsequent activities. This liaison with the local utilities will, of course, be handled through the Consumer Service staffs in each of the Commission's nine regional offices. The regional sales staff will also be responsible for co-ordinating sales promotion in each of Hydro's 103 rural operating areas.

Formation of this new department followed studies conducted jointly by the Commission's Management Services and Consumer Service Divisions. These studies included a survey of the methods used by several United States electrical utilities presently conducting active promotional programs. In planning the most effective type of sales promotion organization to meet the specific requirements of the co-operative

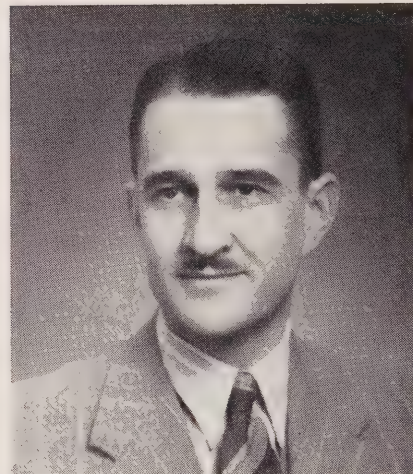


D. J. GORDON

Hydro enterprise, particular attention was given to the procedures and methods of those U.S. electrical supply utilities with decentralized organizational structures similar to Ontario Hydro.

The new Head Office Sales Promotion staff, in addition to Mr. Harmer, will consist of experienced personnel specializing in residential, commercial, industrial and farm sales, as well as market analyses and sales training.

To keep pace with the increased demands for assistance in promoting electric water and space heating installations, plans have been completed for the initial appointment of a Sales Superintendent in each of the nine regional offices. These superintendents will specialize in sales problems, and assist the present Consumer Service staffs in the inauguration of vigorous sales programs by municipal utilities and Hydro's rural area offices. Arrangements for the preparation of advertising and supplementary promotional material will continue to be handled through the Commission's Information Division.



W. R. HARMER

Well-known throughout the electrical industry, Mr. Harmer was born at Fullarton in western Ontario. He attended Mitchell High School, and graduated from the University of Toronto with the degree of B.A.Sc., in 1930.

Mr. Harmer's first position was with the Canadian General Electric Company plant at Peterboro where he completed the company's Test Course. Later he was transferred to the Toronto District Office as Apparatus Sales Engineer. In 1939 he joined Ontario Hydro as Industrial Engineer in the original Sales Promotion Department. In 1945 he became Departmental Engineer, and during the war was closely associated with the Public Utilities War-time Workshop Board, serving as Co-ordinator of the activities of the Board in Ontario. From 1944 to 1947 he served as Secretary-Treasurer of the A.M.E.U. before he was named Assistant Director of Consumer Service.

When it was decided to standardize the frequency in Ontario, Mr. Harmer was selected to head up the Consumer Service Department.

ment of the Frequency Standardization Division. In 1956 he resumed his position of Assistant Director of Consumer Service, Head Office. Mr. Harmer is a very active member of the American Institute of Electrical Engineers, and was Chairman of the Toronto Section in 1954. He is also a Member of the Association of Professional Engineers of Ontario, and takes an active part in engineering activities.

The creation of the new Sales Promotion Department has involved a re-organization of the Consumer Service Division staff. D. J. Gordon, formerly Municipal Service Engineer, has been appointed Manager of Consumer Service, in which position he will supervise the work of the other departments of this division under the Director, I. K. Sitzer. This will include electrical inspection, as well as the industrial, municipal and rural service departments and the division's statistical department.

Mr. Gordon, who has a wide background of Commission experience relating to the operations of the associated municipal utilities, was born at Brockville in 1920. He graduated from Queen's University in 1943 with a Bachelor of Science degree in electrical engineering.

After serving with the R.C.N.V.R. for two years during the Second World War, he joined Ontario Hydro's Municipal Department (nucleus of the present Consumer Service Division). In 1948 he was appointed Consumer Service Superintendent of the Toronto Region and served until 1951 when he returned to the Consumer Service Division at Head Office as Assistant Municipal Service Engineer. In 1954 he succeeded A. G. Code as head of this department. With the exception of a period, September, 1957, to July, 1958, while taking a special administrative course at the National Defence College in Kingston, Mr. Gordon was associated continuously with this position until December 1, 1958, when his new appointment became effective. ■

NET PROFITS

(Continued from page 11)

to less profitable grounds in order to avoid them. However, for those who specialize in smelt, the small fish is a money-maker.

Market Tastes

Market tastes vary amazingly. Most of the Port Dover produce goes to the United States, where it caters to regional preferences. In New York City, for instance, the call is for whitefish, yellows, herring, and bass. Chicago and Detroit citizens are the perch and yellow pickerel eaters. Buffalo, Cleveland, Pittsburgh and Detroit like blue pickerel. Detroit and the midwest cities also go for bass. Strangely enough, our American cousins will not buy fish labelled as "pickerel". Thus these fish become blue and yellow "pike" for U.S. consumption. The co-operatives admit that not enough of their product is sold in Canada, but they cannot be expected to refuse the higher prices offered in the U.S.

Sparkplug of the East Erie Co-Op is Don Pentz, a former banker. Henry Misner, who fills a similar managerial role in the Dover Co-op, is a former Lieutenant-Commander in the Royal Canadian Navy and a lake man since 1923. These men speak with a quiet pride of the expansion of the co-operative fleet from six fishing-tugs to its present place as a world leader of fresh water fishing-fleets in less than a decade. One of the reasons for this confidence is the economic benefits the "co-ops" have conferred upon the community of Port Dover.

Electrical Equipment

The operations of the "co-ops" have been made possible by electricity, these men say, and they point to the heavy investments in electrical equipment as proof of their belief.

East Erie has a \$100,000 investment in compressors, condensers, plate freezers, holding rooms, scaling-machines, conveyor belts, ice-making machines, over-wrap machines, and some 30 motors.

Dover has invested \$17,000 in three electrical ice-making machines, a scaling-machine, and a holding room. An interesting electrical appliance in the East Erie Co-Op is the hand-scaler for fish too big to go through the automatic machine.

"Electricity has speeded up the operation at least a hundredfold," said Don Pentz. "For instance, how fast can you scale a fish by hand? Well, the electric scaler will do 60 pounds of fish a minute! And these machines are being constantly improved. The new scaler gives twice the output of the former revolving drum outfit."

One of the greatest impacts upon the actual fishing itself has been that of the ice-making machines. Dover Co-Op has three of these machines that produce up to 2½ tons daily. The ice, cracked from revolving drums, is put aboard the fishing-tugs, and is used to cool the fish when they come out of the water, a procedure that has been largely responsible for the improved market-quality of the Erie fish.

There is a "production line" technique at East Erie that is dependent upon electricity, and which Mr. Pentz hopes will some day be completely electrical in its conveying process. The fish are brought in to the electric scaler, scaled, put on an electric conveyor belt, and filleted and cleaned as the fish move along the line. The fish are then weighed electrically, and either fast-frozen in 60-pound boxes, or put in 12-ounce cartons by the electric wrapping-machine.

These fast-growing and prosperous businesses, owned by the men who would ordinarily work for them, have proven that even those who go down to the "lakes in ships" can take a highly-individualistic enterprise and make it profitable, by working together and using the most modern methods obtainable. While they still have to battle the moods of the great inland sea, the Lake Erie fishermen do so with the knowledge that their interests are being looked after on shore at all times. ■

**Chairman James Duncan
introduces Ontario Hydro's
new electronic
data processing system**

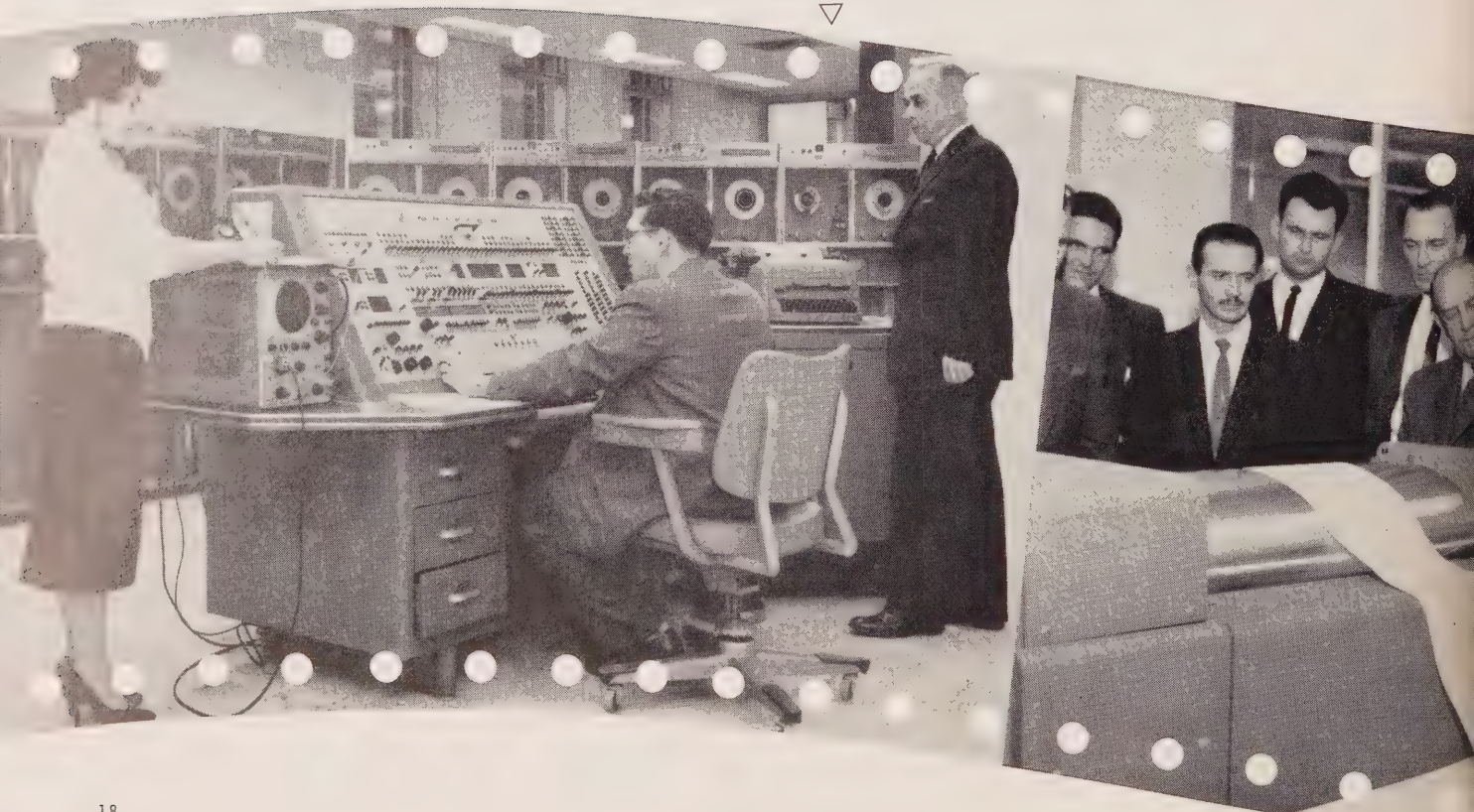
"THE economics of the system I understand, the value to Hydro I appreciate, the progressiveness and the forward thinking which lie behind it I applaud, but don't ask me to explain to you how it works."

With these words, Chairman James S. Duncan formally introduced Ontario Hydro's electronic data processing system to members of the press as well as radio and television representatives.

After more than three years of preparation, UNIVAC II and the

"DON'T ASK

SEATED at the supervisory control panel of the system, Computer Operator D. W. Lumbard is flanked by Mrs. Shiela Bura, programming staff, and Fred P. Thomas, Director, Data Processing Division.



other components of the system were ready to go to work for Hydro's Data Processing Division. In its early stages of operation the new equipment will be used for customer billing and related data, and the preparation of engineering data.

Speaking at the press preview, Mr. Duncan said: "The vast complex of machines which you see here before you is the focal point of a province-wide system." The system eventually will be linked with Head Office by more than 13,000 line-miles of teletype for the collection, collation,

storage and processing of data essential to our enterprise, he pointed out.

"It will enable us to provide better service to our customers throughout the province; it will enable us to undertake many complex engineering calculations, which, heretofore, have been so laborious and time-consuming that they were either not done at all or tended to interfere with more important work in our engineering department.

"... If I speak of this equipment facetiously I have no doubts con-

cerning its effectiveness and the contribution which it is going to make to the accuracy, the better forecasting and the improved control which Ontario Hydro will be able to exercise over its destinies," the Chairman said.

The day following the "press preview," W. Ross Strike, Hydro's First Vice-Chairman, presided at the official inauguration ceremonies, which were attended by representatives of the Ontario Municipal

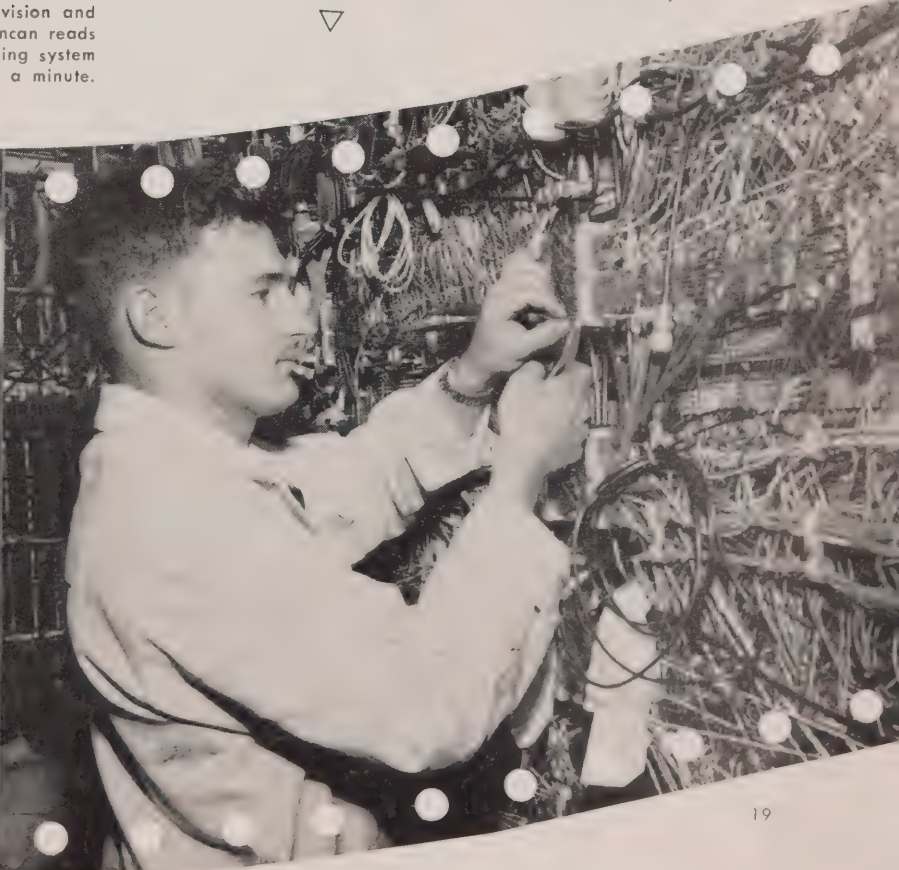
(Continued on page 20)

ME HOW IT WORKS"

DURING a special preview, representatives of radio, television and the press watch as Ontario Hydro Chairman James S. Duncan reads a press release describing the new Electronic Data Processing system as it rolls from the unit's high-speed printer at 600 lines a minute.



INTERIOR of the central computer is a maze of wires to the layman. This photo was taken during assembly of one unit, which contains 200 miles of wiring, 5,600 tubes and 18,000 crystal diodes.



Electric Association and the Association of Municipal Electrical Utilities, executives of supplying firms, from both the United States and Canada, senior officials of the Ontario Government, as well as members and key management representatives of the Commission.

E. H. Banks, Assistant General Manager and Comptroller, who introduced Mr. Strike at the inaugural ceremony, paid a personal tribute to the staff of the Data Processing Division for their work in bringing

the system to "its present state of perfection."

Mr. Strike, in speaking of the installation of the equipment said: "A great deal of this work was done after regular office hours to avoid as much confusion as possible, and I would like to express the appreciation of this Commission to all those concerned in this co-operative effort."

Although the new system is expected to do the work of more than 400 persons, and affect directly or

indirectly some 1,300 jobs, Mr. Strike emphasized that the jobs of these people are not threatened.

"Every effort has been made, and I believe successfully, to relocate some and to train others so that the work of those employees affected by this operation will be continued with the Commission."

Inspect Equipment

Following Mr. Strike's remarks, the visitors toured various sections of the division, which is situated on the third floor at Ontario Hydro's Head Office in Toronto. They watched as a high-speed printer clacked out a news release about the event at the rate of 600 lines a minute. Then Hydro technicians explained the operations of the computer and its component units.

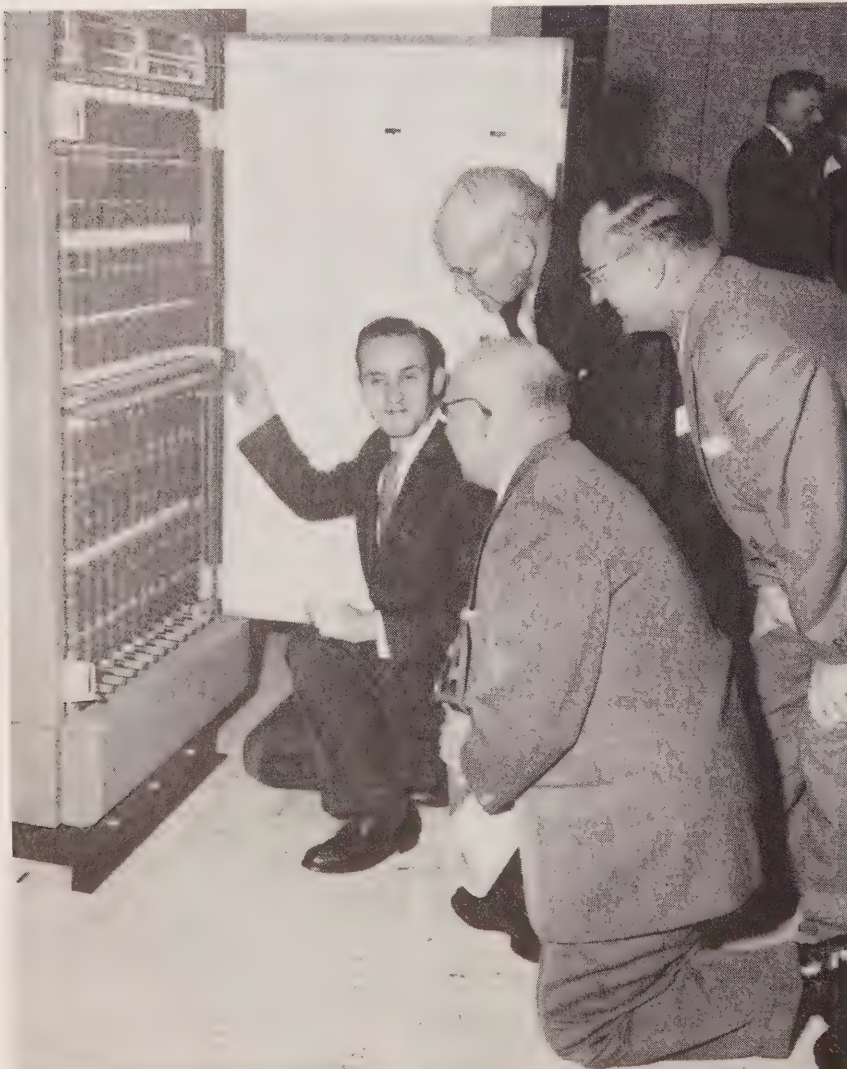
The electronic machines comprising the system are rented by Ontario Hydro at an annual cost of approximately \$670,000, but electronic data processing is expected to save hundreds of thousands of dollars each year. By 1963 the anticipated saving will total \$1,000,000 per year.

F. P. Thomas, Director of the Data Processing Division, praised the co-operation of Hydro's other divisions and the regional areas and staff. Without this close collaboration and help, he said, the creation of the E.D.P. system would not have been possible.

Mr. Thomas also expressed appreciation for "the unfailing co-operation and understanding" of union officials who, he said, contributed a great deal to bringing the development of the new system to fruition. The Chief Stewards of the Ontario Hydro Employees Union were invited to one of several "open houses" to tour the third floor for a view of UNIVAC II and its component units.

Later this year a special viewing-room will be opened on the third floor where visitors can watch the electronic "heart" of the system in operation in its antiseptic, air-conditioned environment. ■

DURING the official inauguration ceremonies, Ben Hollander, Remington Rand Ltd. (left), explains the construction of the "memory" or storage unit of the new equipment to Dr. V. S. Wilson, Etobicoke Township, President, O.M.E.A. District 4 (kneeling); Ray Pfaff, St. Catharines, First Vice-President, A.M.E.U., and W. Ross Strike, Hydro's First Vice-Chairman.





BELL TELEPHONE COMPANY'S Harold Clumpus demonstrates the operation of the high speed sorter unit to Miss Lois Rundle, Supervisor, Communications Section, Data Processing Division.

ELECTRONIC SORTER FOR NEW COMPUTER

DESIGNED and manufactured in Canada, a punched paper tape sorter has been installed in Ontario Hydro's Head Office in Toronto. It has been hailed as "a unique Canadian contribution to integrated data processing."

More than 200 miniature electrical units are packed into the machine, which has an overall size of 14 by 5 feet. If the more commonplace types of tubes and other components had been used in the machine, which is considered to be the latest transistor equipment, the sorter would have filled a large room.

The basic requirements for Hydro's system were developed to include a sorter with certain previously unobtainable characteristics, especially as to speed. The logic was developed by one of Hydro's Data Processing Division engineers. The Bell Telephone Company of Canada undertook to meet the specifications, enlisting the services of

the Northern Electric Co., which carried out the actual engineering design and manufacture at its Belleville, Ont. plant. The sorter's special features, while built to Hydro's specifications, are expected to be in demand by other organizations across Canada and abroad.

The sorter is a vital link in the new Data Processing System currently being installed, centering on a Univac II computer in the Commission's Head Office. Much of the massive flow of data from Hydro's area offices, including payroll, personnel, stock control, engineering, accounting and other information will come in via teletype circuits. Each type of message has an identifying code. The sorter identifies these codes and repunches tapes so that each tape contains data of only one kind. The sorter can handle messages at the rate of 3,600 characters a minute, and the data on the tapes thus produced are then converted to magnetic tape form for Univac II. ■

Delhi Surplus Brings Rate Reduction

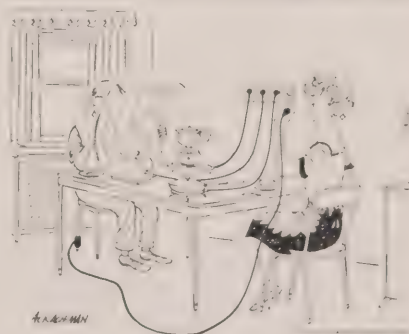
Electrical customers in Delhi will benefit this year from an operating surplus accumulated in recent years by Delhi P.U.C. The surplus will be turned back to the consumers in the form of lower Hydro rates.

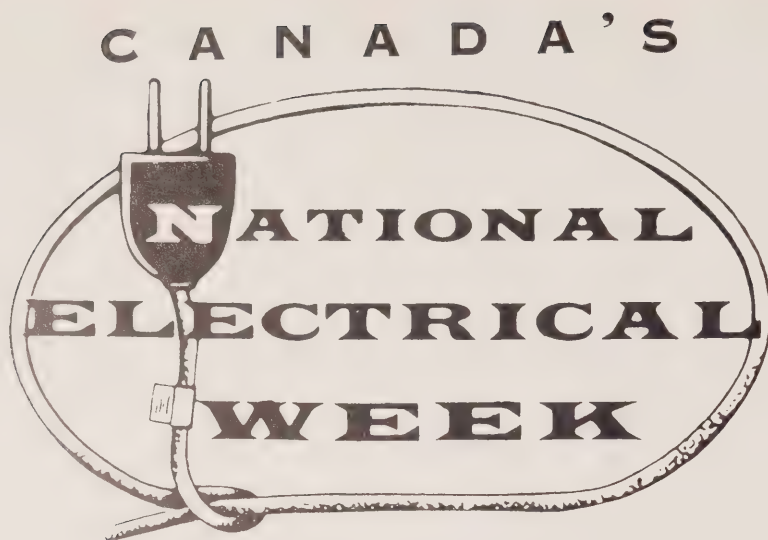
Air Conditioners Boost Sudbury Loads

Increasing use of air conditioning units eventually may establish the summer months as the season for the peak electrical load at Sudbury. During a recent meeting of Sudbury Hydro-Electric Commission, Manager Hugh Mackinnon reported that there is a tendency for new establishments in the Nickel City to install "a relatively large air conditioning load." This, he said, could conceivably change the peak demand season from winter to summer. During the first six months of 1958 the revenue of the Sudbury Hydro Commission was \$65,373 higher than in the comparable period of 1957, reflecting increased use of electricity.

Honor Wingham Area's Safety Record

An outstanding safety record recently brought recognition for 30 members of Ontario Hydro's Wingham Area staff. At a banquet in their honor they were congratulated by John MacLellan, the Commission's Director of Accident Prevention, and several representatives of the Georgian Bay Region on their achievement in completing 1,000 accident-free days. The Wingham Area includes some 4,500 Hydro customers who are served by some 700 miles of distribution line.





ONTARIO HYDRO CO-ORDINATES LOCAL PLANS FOR THE PROVINCE

CANADA'S third observance of National Electrical Week this year—February 8-14—will stress the theme "Electricity Builds Jobs."

Sponsored by the Canadian Electrical Council, which represents every segment of the nation's electrical industry, the celebrations present a valuable opportunity for electrical utilities, contractors, manufacturers, distributors, and retailers to spotlight the benefits and scope of electricity in modern day living.

Inaugurated in 1957, National Electrical Week (which also appropriately commemorates the birthday of the famed inventor, the late Thomas Edison) has gathered support each year with the promise of even greater participation in 1959.

On the provincial front, arrangements are being co-ordinated by the Electric Service League of Ontario in co-operation with a special provincial committee. The honorary

provincial committee, headed by Ontario Hydro Chairman James S. Duncan, includes such well-known leaders in the electrical field as Bert Merson, President, O.M.E.A.; J. A. Williamson, President, A.M.E.U.; O. W. Titus, President, Canada

Wire and Cable Co.; J. H. Smith, President, Canadian General Electric Co., and G. L. Wilcox, President, Canadian Westinghouse Co. Representatives of Ontario Hydro, the Ontario Municipal Electric Association, Association of Municipal Electrical Utilities, Electric Service League of Ontario, Canadian Electrical Distributors Association, Electrical Contractors Association of Ontario, Canadian Electrical Manufacturers Association, Canadian Lighting and Fixture Manufacturers Association, Ontario Association of Radio and Appliance Dealers, International Association of Electrical Inspectors, Canadian Association of Radio and Television Broadcasters, publishers, International Brotherhood of Electrical Workers, and the Ontario Fire Marshal's Office compose the provincial committee. W. J. Wylie, Director of Consumers Service, Toronto Hydro-Electric System, is Chairman of this group, while Harry Foy, E.S.L. of Ont., is Secretary.

In addition to a tie-in with national advertising campaigns, the provincial committee has laid the



INFORMATION OFFICER K. J. Brown (left) outlines plans to K. D. Taylor, Consumer Service Engineer, and P. W. Pickering, Electrical Inspection Superintendent, East Central Region.

groundwork for local campaigns, sponsored and directed locally. This preliminary work includes the provision of a wide variety of advertising material, which is available to local committees at cost.

Bumper stickers, newspaper supplements, truck and bus cards, window banners, meter postage slugs, radio and TV interviews and panel discussions all play an important part in the program.

Cover All Fields

Ontario Hydro and the Canadian Electrical Association are providing prepared speech material for presentation at school, service club and other gatherings, which feature the National Electrical Week theme. Copies of this material will be made available on request.

But it is recognized that local participation and the local approach to the campaign is the key to its success.

Thus the provincial committee has spread responsibility for various aspects of the program among its members:

(Continued on page 24)

Newspaper Masthead

LIVE BETTER ELECTRICALLY WITH ALL THE LATEST ADVANCES

HOUSEHUNTING?

Select the electrical standard that suits YOUR needs



GOLD MEDALLION

SPECIALIZE MEDALLION

HOW THE ELECTRICAL INDUSTRY
ENSURES BETTER LIVING FOR
ALL CANADIANS

**NATIONAL
ELECTRICAL WEEK**

FEB. 8-14 1959

ELECTRICI BUILDS JOBS

FEB. 8-14
1959

ELECTRICITY BUILDS
JOBS

WINDOW BIDDERS ELECTRICITY BUILDERS

1 - PC. MOBILE BANNER 1.25 each

Orders must be received before December 20th - 1958.



TRUCK and bus cards, counter cards, suggested newspaper supplements and many other types of material have been prepared to spark interest in the 1959 celebrations.



THIS YEAR'S observance of National Electrical Week in several Ontario centres will feature public inspection of all-electric or Medallion homes. This photo shows a recent Medallion "open house" at London, Ontario.

The job of co-ordinating activities among manufacturers and distributors has been delegated to the Canadian Electrical Manufacturers Association through its Electrical Bureau of Canada:

The Electric Service League of Ontario will handle liaison with electrical contractors and builders;

Observance of National Electrical Week this year will again give added impact to the year-round, co-operative "Live Better Electrically" program being sponsored by Ontario Hydro and the associated municipal utilities. It is natural, therefore, that the Commission's Information Division officers, as well as its consumer service engineers and their staffs in the nine strategically-located regional offices throughout the province, should have been chosen to spearhead the formation of local groups, including representatives of the municipal utilities.

These municipal committees, which will have a key role in promoting local National Electrical Week celebrations, will supervise contacts with the press, radio and TV in addition to electrical contractors and appliance dealers in their respective areas, as well as handling all other arrangements for local observances.

In singling out last year's campaign in Kingston as an example of what an alert local committee can accomplish, H. J. Foy, Manager of the Electric Service League of Ontario, recently pointed out that much of the promotional material planned and produced in Kingston was used in other sections of the province and brought enthusiastic response. In addition to this literature, the Kingston committee also sponsored a number of radio interviews, and featured better electrical wiring and appliances in two supplements published by local newspapers.

One of the highlights of the observance in the Toronto area this year will be an "open house" at Cooksville, Ont., where 87 modern,



CANADA'S first Medallion subdivision builder, J. N. Hanemaayer (right), receives a Bronze Medallion Home award from Mayor Keith Hymmen during a recent Kitchener ceremony.

FIRST BRONZE MEDALLION SUBDIVISION

FIRST in Canada to build a complete "Medallion Home" subdivision, Dutchman Home Builders, Ltd., Kitchener, recently received national recognition for setting "a new high in living standards."

The Medallion is a symbol awarded to contractors erecting homes that meet a fine lighting and appliance standard, and conform to the Red Seal requirements set by the Electric Service League of Ontario.

J. A. Hanemaayer, President of Dutchman Home Builders, received the League's framed certificate from Mayor Keith Hymmen, of Kit-

chener, at a luncheon given by the Electric Service League of Ontario. Guest speaker T. C. Thompson, Toronto, representing the National Home Builders Association, said that in designing his 41 homes for Jackson Park subdivision, Mr. Hanemaayer had provided for not only the present but for the future.

To mark the presentation of the Bronze Medallion, the *Kitchener-Waterloo Record* devoted a special section to Jackson Park subdivision and its many features. On its pages was a photograph and description of one of the Medallion homes. ■

all-electric homes are being built. These new suburban houses, which incorporate electric space heating installations, when completed, will qualify for Gold Medallion awards—"the hallmark of electrical excellence."

In Ottawa where the local committee has been active since Novem-

ber, 1958, plans call for the publication of a 12-page National Electrical Week supplement in at least one daily newspaper. The London Free Press is also planning an 8-page color supplement. Similar promotion on varying scales will be sponsored in other parts of the province. — *By R. J. McDonnell.*



LET'S CHAT

With Gwyneth Reed of Ontario Hydro's Anne Allen's Homemakers' Service.



CANADA'S vigorous winter climate poses many problems for the homemaker. For instance there's the question of drying laundry. This either means hanging dripping clothes and other articles in the basement or out of doors. If the weather is cold and windy they freeze and whip on the lines and quite often are torn. Then too, there's the unpleasant hazard of frost-nipped fingers or, at least, chapped hands.

An electric clothes dryer is the most satisfactory solution to inclement weather and back-breaking laundry baskets.

Most electric clothes dryers operate on a 220-volt circuit. A few can operate on a 110-volt circuit, but require a longer drying period. Dryers are equipped with timers and heat controls. The instruction booklet, a most important accessory to every electrical appliance, gives the heat, the setting and the average time required to dry various types

of clothing. A "cool or no-heat" setting allows you to fluff pillows or dewrinkle drapes and items such as men's synthetic suits.

Ozone lamps destroy bacteria, resulting in fresher, sweeter-smelling clothes than possible even in the great outdoors, without running the risk of exposure to weather, dust, and other nuisances.

An electric dryer has an added advantage in the winter months. When children remove wet snow-suits, excess snow can be removed, and the apparel placed in a dryer for a few minutes. They are dried quickly and ready for the next job of building snowmen or forts. This eliminates the need of extra snow-suits or other articles of clothing that children outgrow so quickly.

Ironing is reduced considerably. For example, knitted cotton items, such as T-shirts, can be dried in a load containing terry towels. Remove the cotton articles while still slightly damp, fold and place on top of the unit to finish drying. This eliminates ironing.

Electric dryers require little care. Empty the lint trap after each use, and wipe the cabinet exterior. Brush out the air-intake passage and the floor of the cabinet occasionally. If the dryer is located in the kitchen it must be connected to a ventilating system. In the basement, the amount of natural air circulation is the determining factor.

Electric dryers help make life easier—tomorrow's way of life today.

Now let's look at the social side of winter for a moment. The crisp, cold evenings are ideal for enjoying the company of family and friends.

The hostess looking for a new idea in entertaining might consider a dessert party with the following menu:

*Angel Pie. Hot Mince Pie.
Coffee
Mints, Nuts*

Angel Pie is simple to make, and it's certainly delectable. Here's the recipe:

Meringue Crust

2 egg whites
1/8 teaspoon salt
1/4 teaspoon vanilla
1/2 teaspoon lemon juice
2/3 cup granulated sugar

Beat first four ingredients with an electric mixer to a stiff foam. Add sugar, a tablespoon at a time, beating until dissolved and meringue holds a peak. Spread in a well-greased 9-inch pie-plate, building up around the sides. Bake one hour at 275°F.

Angel Pie Filling

1/2 cup orange juice
2 tablespoons lemon juice
2 egg yolks
Grated rind of one orange
1/3 cup granulated sugar
3/4 cup cream, whipped

Blend first five ingredients. Cook over boiling water, stirring constantly, until smooth and thickened. Cool. Spread over the meringue crust. Top with whipped cream. Garnish with toasted, slivered almonds.



THESE "before-and-after" views of Wallaceburg's street lighting system dramatically compare the increased illumination provided by the new luminaires (lower photo) with the shorter range of the old fixtures (right).



ONTARIO'S "GLASS TOWN" INAUGURATES NEW MUNICIPAL BUILDING AND LIGHTING SYSTEM

WALLACEBURG'S BIG



THROWING the switch to inaugurate the lighting system during the ceremony, Ontario Hydro Chairman James S. Duncan was assisted by Wallaceburg Hydro Chairman J. D. Hawken (left) and Mayor J. L. Thompson.



WALLACEBURG'S handsome, two-story municipal building—officially opened by Ontario Prime Minister Leslie M. Frost—provides space for municipal, police and fire department staffs. Typifying civic optimism, it has been designed to permit future enlargement when necessary.

MANIFESTING what “forward” planning in the municipal field can accomplish, Hon. Leslie M. Frost, Ontario’s Prime Minister, recently opened Wallaceburg’s new municipal headquarters and Ontario Hydro Chairman James S. Duncan officiated at the inauguration of the community’s new street lighting system.

For this town of 8,500 people, located in the heart of southwestern Ontario’s industrial belt, the ceremonies marked the culmination of years of study and discussion.

All present municipal services, with the exception of the Wallaceburg Hydro-Electric Commission’s offices, are now accommodated in the handsome new structure; and typical of Wallaceburg’s confidence and optimism, the design of the new “town hall” will permit expansion

of the various civic departments to serve a future city of some 20,000 people.

A feature of the interior construction has been the installation of modern lighting and other auxiliary equipment. In addition to the council chambers, which also serve as a courtroom, the building incorporates a fire-hall and fully-equipped firemen’s quarters; offices and other facilities for the police department, as well as space for the clerk, assessor, tax collector and license bureau staff.

New Lighting

Of particular interest to Wallaceburg citizens was the formal “switch-over” to the new street lighting system for the town’s main business area. Participating in this brief but dramatic event, Mr. Duncan was assisted by Wallaceburg’s Mayor J. L. Thompson and Hydro Chairman J. D. Hawken. Hundreds of well-wishers from neighboring communities and the immediate vicinity, including Ontario and Canadian government representatives, were present to witness the event.

The new lighting facilities include 63 “power-groove” fluorescent luminaires. This \$75,000 installation is believed to be the first of its type in Canada. Plans call for the replacement of other older fixtures

throughout Ontario’s “Glass Town” on a continuing basis.

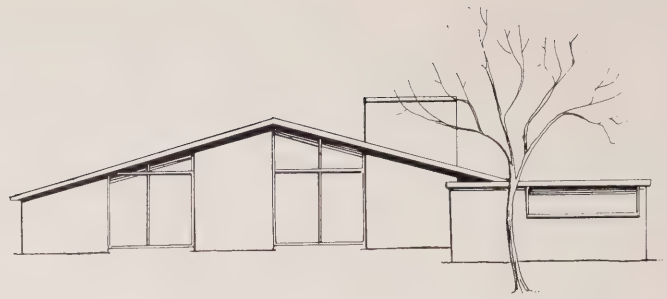
In complimenting Wallaceburg’s civic officials on their initiative, Mr. Duncan expressed confidence that the continued availability of electricity at relatively economical rates will provide the necessary impetus for Ontario towns like Wallaceburg to expand into cities. In dealing with Hydro rates, he pointed out that the cost of electricity on a province-wide basis, has decreased by four per cent while Wallaceburg’s electrical rates have been reduced by eight per cent since the end of World War II. The Canadian Consumer Price Index registered an 86 per cent gain in the general cost of living during this period.

The Hydro Chairman predicted dynamic and progressive years ahead for Ontario’s electrical utilities, with electricity playing an increasingly important role in all phases of life. Dealing specifically with the question of electric heating, he voiced confidence that this latest type of application would ultimately prove to be the soundest and most economical method of heating the province’s new homes and providing auxiliary heat in older homes.

—by Robert McDonnell

DAY

Speakers stress growing possibilities of electric heating in Ontario at the meeting with the



FORWARD LOOK

THEY didn't wear space suits, but they discussed a topic as modern as tomorrow.

The subject was electric heating in the home, in public and commercial buildings, and even in industry; and the 250 or more Ontario utility, electrical contracting and allied industrial representatives, who participated in a two-day A.M.E.U. "Institute", got an exciting look at the "tremendous possibilities" of this relatively new type of electrical application.

This Toronto meeting with the "forward look" stemmed directly from Ontario Hydro's mid-1958 announcement of the removal of the restrictive service charge and the establishment of a new rate for electric heating. Recognizing the urgent need of basic training and information for Ontario utility staffs and industry allies, the recent A.M.E.U. gathering brought together an impressive array of experts. During the ensuing sessions, these authorities covered virtually every phase of the electric heating field—from insulation to installation.

Bringing greetings from Ontario Hydro, First Vice-Chairman W. Ross Strike commended Program Chairman Harry Hyde and members of the A.M.E.U. Engineering Section, who initiated and handled all arrangements for the conference.

"It is gratifying to all of us to see the ready response of the A.M.E.U. to the challenge of providing expert technical information on this new but growing electrical application," Mr. Strike said.

"A glance at the program readily indicates that Mr. Hyde and his committee have spared no effort to cover virtually every conceivable aspect of this rather broad subject."

While many of the 15 papers presented were technical in character, they reflected a growing customer desire for "all-electric, comfort living." Based on the experiences of other utilities and partner industries in Canada and United States, the papers also provided many practical suggestions for widening the scope of electric heating installations in Ontario.

In view of the widespread interest in the subject, summaries of several key papers presented during the A.M.E.U. Engineering Section's "Institute" are published herewith:

INSULATION

Excerpts from the opening address by W. B. Breckon, Manager, Fibreglass Canada Ltd., Toronto.

"Insulation and comfortable living are inseparables. In the summer, insulation is necessary to retard the 'heat flow' into a building until ventilation can take the heat away. Therefore, with proper insulation, a

structure in any climate can be more comfortable in the summer. If the structure is air-conditioned, the insulation will reduce not only operating costs, but also the initial outlay for cooling equipment.

"Winter comfort is governed by two main factors: the temperature of the air, and the temperature of the walls, ceilings and floors. Warm walls, ceilings and floors, through the proper use of insulation, are the only answer to winter comfort. What is the 'economic thickness of insulation' required with electric heating in Canada? Generally speaking, with due consideration for certain variances, the 6-4-2 formula (six inches of insulation in the ceiling; four inches in the side walls and two inches between floors and unheated spaces below) established in those sections of the United States having similar conditions to our own, will be applicable."

SPECIFIC INSTALLATION REQUIREMENTS

Excerpt from paper presented by J. L. Payne, Marketing Manager, Insulation, Canadian Gypsum Co., Ltd., Toronto.

"Just as water will always flow down the hill, so heat will always seek to transfer itself to a cooler place.

"The well-insulated house is one in which all outside surfaces are

protected so as to slow down the escape of heat from the inside. The ceiling, outside walls and floors over unexcavated areas are protected by mineral wool—installed to thicknesses of 6", 4" and 2" respectively and separated from the inside of the house by a vapour barrier. Areas beyond the insulation, particularly the attic, are well-ventilated, doors and windows are double-glazed, or protected with storm sash, and the cracks around them sealed with weather stripping. Fireplace chimneys are provided with dampers and the closing mechanism of kitchen exhaust fans fit tightly. A house protected against heat loss in this way could be heated for less than half of what it would otherwise cost. Such a saving can bring the luxury of electric heating well within the practical price range."

EFFECT OF INSULATION ON HEAT LOSS

Excerpt from paper presented by Ira Lindsay, Construction Division, Gypsum, Lime and Alabastine Co. Ltd., Toronto.

"It is customary to determine the total capacity required in a residence by calculating the requirements for the individual rooms and adding the results. However, a fairly accurate determination can be made by ignoring the divisions of interior space and calculating the heat losses through the various sections of the building as a whole."

PLUGGING HOLES IN INSULATION

Excerpt from paper presented by R. W. McKinley, Technical Representative, Pittsburgh Plate Glass Co., Pittsburgh, Pa.

"Insulating glass in windows and doors is essential to the healthy development of the electric heating market.

"In a well-insulated house, 1/2 to 2/3 of the entire heat loss may be charged against ordinary, single-glazed doors and windows. Even in a 'high-loss' uninsulated house, single windows and doors may contribute 1/3 of the entire heating load.

"The additional cost of double

glazing and storm doors at \$2.00 per sq. ft. will amount to \$400. The additional cost of weather stripping at .50¢ per sq. ft. will amount to \$100. The additional investment of \$500 will be repaid in less than 4 years through savings in heating expenses with a major comfort bonus thrown in for good measure."

INSTALLATION

RESIDENTIAL HEATING

Excerpt from paper presented by David Markel, Treasurer, Markel Electric Products Inc., Buffalo, N.Y.

"To give you a better idea of what electric heat can mean to a builder, I'd like to quote from a talk given by a builder, Jack R. Worthman, before an electric heating conference recently held in New York City:

"As builders, we like electric heat. It saves about 15 feet of floor space, which represents a saving of about \$200. It saves a chimney cost of \$100. Planning is more flexible since the location of the furnace, chimney, registers and plenum is eliminated. A better heat with better control is an additional sales point to offer our customers. In most

cases it eliminates one sub-contractor (our electrician does both the heating and wiring). It eliminates one utility bill, one meter reader or one oil tank. Installation costs for electric heat are comparable to a warm air system and generally less than a hot water heating plant. In addition to the space saved by eliminating a furnace, we will save approximately \$30 for a door covering the furnace; \$20 for soundproofing the furnace room; \$100 in slab ducts; \$125 for a buried oil tank, and usually \$200 to give the heating and wiring contracts to the same contractor."

RESISTANCE HEATING

Excerpt from paper presented by R. L. Boyd, Product Manager, Commercial Space Heating Division, Edwin L. Weigan Co., Pittsburgh, Pa.

"Sometimes we forget what the customer is really buying, and neglect to tell the story of comfort—the true comfort of just the heat you want—exactly when and where you want it—in an environment effectively insulated from external thermal influences. This is the primary product we are selling—COMFORT. Do not lose sight of this in

(Continued on page 30)

MANY of the delegates represented Ontario's municipal electrical utilities. Here they are giving their undivided attention to a discussion during one of the A.M.E.U. sessions.





FEATURING the insulation session was a paper on double glazing by R. W. McKinley, Pittsburg, Pa., (left), who is shown discussing the device he used to demonstrate the advantages of double glazing in reducing heating costs with W. J. Crocker, Port Credit, Ont., and Harry Hyde, Toronto Hydro-Electric System, who served as program chairman of the Institute.

discussing some of the other advantages, such as:

1. The elimination of high-priced labor needed in coal burning plants for coal handling, ash handling, stoking, valve turning, whistle-pulling, etc. It's the avoidance of costly maintenance too—for electric heat is automatic and practically maintenance-free;
2. Heating economies can be effected by cutting back thermostat settings during non-occupied hours. Schools and many industrial plants, for example, are occupied for only about 30% of the 720 hours a month. Churches and many theatres are occupied fewer hours.
3. It is less expensive to build electric lines instead of costly steam lines, gas lines, or trucking other fuels long distances. This would apply to remote locations like cottages, pumping stations, field houses for athletics—on down to
4. An accounting or tax advantage has helped electric heating. Since the cost of fuel (whether it be gas, oil or electricity) is a 'current expense' in accounting lingo (like lighting and like salaries)—it is in reality paid for in 'inflated dollars' before taxes. This is not true of the dollars paid for expensive fuel burning systems (or even the inexpensive electric heating system), paid for by funds accumulated from 'net income' for plant expansions. The fuel expenses are deducted prior to taxes. A little saving in first cost pays a lot of operating cost with the tax collector helping out this way.

watchman's stations at industrial plants.

5. In the United States, most commercial rate schedules work out to lower kw-hr. costs than residential rates—hence leading to lower cost BTU's. By judicious engineering, often the heating system contributes little or nothing to demand—resulting in really startlingly low rates. These rates seem to be getting more and more economical—as more and more electric devices are used by the customer, and as more utilities set up special rates for electric resistance heating.

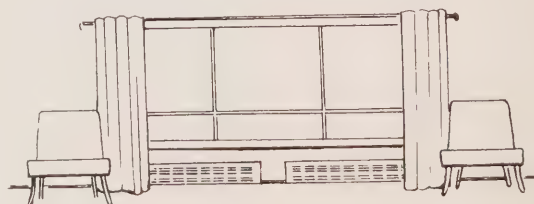
6. Transformer, power lines, etc., already installed to serve machinery in industrial plants and fans and air conditioning of commercial structures, can be used beyond their rated capacity in the winter months, because their practical capacity is determined by power transformed without overheating. Electric heating levels off seasonal use of installed capacity, making for a better return on utility investment.

7. Genuine heating comfort can eliminate customer complaints, employee complaints and sickness. Electricity is the means for providing real comfort heating."

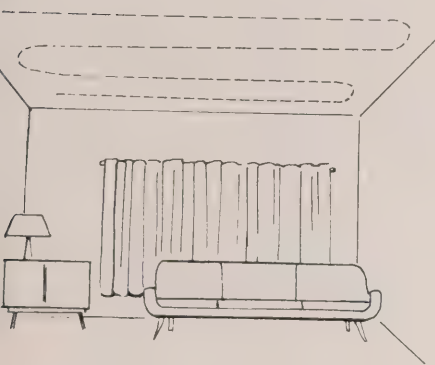
ELECTRIC SPACE HEATING BY OFF-PEAK POWER

*Excerpt from paper presented by
J. R. Charlton, Manager,
Manufacturing Dept.,
Canadian Curtiss-Wright Ltd.,
Montreal, P.Q.*

"Utilities seeking to expand their revenue and increase their service to the communities can do no better than to develop electric space heating as it represents the largest re-



maining untapped market for electric energy. Utilities will find, from their point of view and from the consumer's, that the type of electric heating, which uses off-peak power is by far the most desirable, for, by this means, the customer can be provided with the most uniform type of heating at the lowest cost, and the utility can develop the greatest load with the least additional investment.



"The greatest use of stored energy heating is in Europe, specially in Germany, England, Switzerland and Austria.

"In these countries, in the past two years, the connected load has increased by 26,400 kilowatts in Germany and 39,000 kw. in Austria. The total connected load in the two countries is now about 150,000 kw. The installed load in Great Britain is larger, but exact figures have not been published. The rate of growth of the load in Austria and Germany is especially interesting, as it is many times the rate for unrestricted demand space heating. The climatic range where these installations have been made is fully comparable to the more heavily-populated areas of Ontario and Quebec, and there can be no question but that the system is practical and useful for Canadian power companies.

"Off-peak energy heating is not new. One of the most interesting of the early American installations was made near Springfield, Mass., in

1929. In this trial, a water storage system of two, 7,500-gallon tanks with two, 10-kw. heaters was used to heat and to cool a building measuring 100,000 cubic feet, and built of concrete and brick without insulation. Since the war, the power company serving the area has begun to promote residential types, made by a local enterprise which uses a 300-gallon tank and a 14-kw. heating installation.

"The principal advantage to the power distributing company of storage units is that the consumption of electricity can be increased without commensurate increase in generating and distributing facilities. In fact, in England, special off-peak rates are allowed only on the condition that the connected load will not require additional capital expenditure, and some of the largest installations in the world are located in that country. London University, a good example, has an installation using 44,000 gallons of water, and 3,500-kw. capacity to heat buildings totalling 2,750,000 cubic feet."

ELECTRIC COMFORT HEATING FOR INDUSTRY

*Excerpt from paper presented by
T. Skogland, Manager, Engineering,
Component Heating Devices,
Canadian General Electric Co. Ltd.,
Toronto.*

"In a talk given earlier this year at the National Industrial Electric Heating Conference by T. R. Jordan, 'Electrical World' magazine, the following information was given concerning the growth rate of the industrial market for electric space heating. A survey questionnaire was sent to 165 utilities. Among the questions asked was the number of resistance heating installations on their lines. A total of 52 returns were used and plotted on a scale. In 1954, there were 14,500 resistance heating installations in industry. In 1955, there were 16,200; 1956—18,350 and by June, 1957, almost 20,000. The load during this time increased from 183,000 kw. in 1954 to 264,000 kw."

RADIANT ELECTRIC HEATING

*Excerpt from paper presented by
N. R. Campey, Assistant Sales Manager,
Pyrotenax of Canada Limited, Trenton.*

"Electric heating, using heating cables embedded in floors, walls, or ceilings, is usually termed radiant, since the heat is propagated by rays through the ether, which give off their heat when they strike the objects of the room. The capital cost of the installation is small, compared with a conventional system. Suitable types of electric cables, usually with metallic sheaths, lend themselves particularly well to direct burial in concrete, plaster, etc.

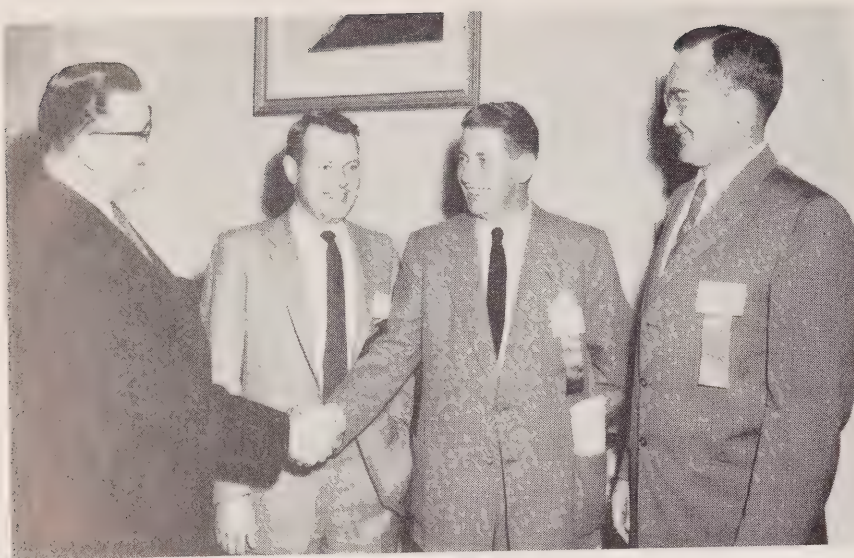
"In this type of heating the same temperature is acquired by the objects in the room as that of the surrounding air, whereas in a hot air, or other conventional systems, this is not usually the case. In consequence, it is often quite satisfactory and comfortable to maintain the room temperature at 5° to 10°F. lower. Because convection air currents are kept to a minimum, ventilation can, consequently, be more easily controlled and room decoration is not disfigured by dust markings. This also ensures that there is very little difference between floor to ceiling temperatures. Where the heating is applied by cables embedded in the floor, there is a natural comfort created by the warmth at the feet.

"Because the entire heating system is completely hidden, no allowance has to be made when positioning articles in the rooms for the location of heating devices. This is advantageous for office buildings. Semi-portable partitioning can be moved at any time without affecting the heating conditions. A radiant electric heating system also requires no space for a heating plant, except for the necessary switches and controls, with a possible increase in size of transformers on larger installations.

"Since the heating cable is buried

(Continued on page 32)





ONTARIO'S first electric heating conference attracted registration from widely-separated points. Exchanging greetings, left to right, are: William Hollar, Detroit Edison Company, a speaker; Gordon Denford, Victoria, B.C.; D. S. Speers, Waterloo, and R. L. Boyd, Pittsburg, Pa.

in the fabric of the building, the building itself becomes a heat reservoir. This is particularly noticeable when the cable is buried in a heavy concrete floor where the heat stored may keep the building warm without any significant loss of temperature for some hours after the heating has been cut off.

"The cable would normally be installed in floors, walls or ceilings in the early stages of construction and need not be finally connected until the building is completed. In this way there are no additional fixtures to be added after the final decoration, which some times damage the finish. To plan a good electric heating installation, the decision to have electric heating must be taken into account when the building is designed. If this is done, adequate insulation can be included at the construction stage far more easily than any modifications to a completed job."

THE DETROIT EDISON STORY

*Excerpt from paper presented by
William Hollar, Director,
Domestic Space Heating,
Detroit Edison Company, Detroit.*

"Probably the key factor in our growing interest in the electric heating market was a customer survey

made in 1954. We went and personally interviewed 138 customers who used electricity as a primary source of heat. In general we found people well satisfied. They were comfortably warm; they liked individual room temperature control and their rooms heated quickly. The 'clinch' from a marketing viewpoint was a favorable attitude toward operating costs. Cleanliness and convenience compensated for relatively higher costs in the opinion of 7 out of 10. Obviously not everybody was satisfied, but most of those who weren't lived in poorly insulated dwellings.

"In our planning for 1958 we decided to make it a year of preparation and education—for our allies . . . for our employees . . . for our customers. Our allies—whether for modernization or new construction are: The distributors of equipment, electrical contractors, insulation companies, modernization companies, architects and engineers, builders, mortgage bankers, appraisers, trade associations and government agencies, which guarantee mort-

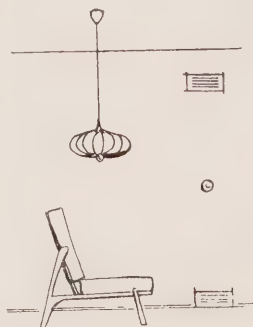
gages allowing qualified buyers to own homes on long term mortgages with very low down payments.

"An educational program was begun for these allies with a series of meetings to acquaint them all with the customer benefits of electric heating, and to show them the particular benefits to themselves. A school was started for electrical contractors. The subjects discussed included: Calculation of heat losses and job layout, application and design of equipment, code requirements, and electric rates. So far more than 550 electrical contractors have been exposed to this training. We urge the electrical contractor to team up with a reputable insulation contractor so the customer will get a good job of insulation.

"We began 10 years ago training our sales department employees so they could answer inquiries and keep well informed on available equipment and operating costs. Later we extended this educational program to all of our 11,000 employees. We increased intensive training of our field organization, held local meetings for our customer office personnel and service men, and we called our employees' attention to successful installations of electric heating in an especially-prepared booklet, which gave the facts about costs and equipment. This booklet was also made available to our customers as we went about the job of educating them.

"In 1958 our immediate promotion took the form of a locally adapted gold medallion award—nationally planned by the 'Live Better Electrically' Project. It calls for the installation of basic major electrical appliances, light for living, certified wiring and electric heating. Any builder who agreed to construct and display for at least 30 days a model home meeting the gold medallion requirements received billboard signs, free liter-

(Continued on page 36)



ALONG HYDRO LINES



Kitchener Names New Chief Engineer

Associated with Kitchener Public Utilities Commission since he was 17 years of age, Rudolf (Rudy) Senyshen, has been named as the utility's Chief Engineer, succeeding the late A. W. Bromley.

Born at Waterloo, Mr. Senyshen worked as an office clerk in every department of Kitchener P.U.C. Enlisting with the R.C.A.F. in 1943 he served for two years, resuming his position at Kitchener in 1945.

In 1946 he entered Queen's University, Kingston, and graduated in 1950 in engineering. In the summer months during this period, he continued working for the utility.

From 1950 to 1952 Mr. Senyshen took a two-year apprentice engineering course for graduate engineers at Canadian Westinghouse Limited, and in June, 1952, rejoined the Kitchener staff as Assistant Engineer, a position he held continuously until his recent appointment.

Richmond Hill Cuts Hydro Rates

An average overall reduction of nearly seven per cent in rates went into effect at Richmond Hill on January 1 this year. Revenue from domestic customers will be reduced by 6.5 per cent, from commercial customers by six per cent and from power customers by five per cent. Revenue from flat rate water heaters will be reduced by 11.5 per cent.

North York Cuts Water Heater Rates

A reduction in rates on flat-rate water heaters will mean a decrease in revenue of \$280,000 in 1959 for North York Hydro Commission. The new rates, now in effect for nearly 35,000 customers in the township, mean a decrease of seven cents a month for 400-watt heaters, 17 cents for 600-watt and 76 cents a month for the 1000-watt type.

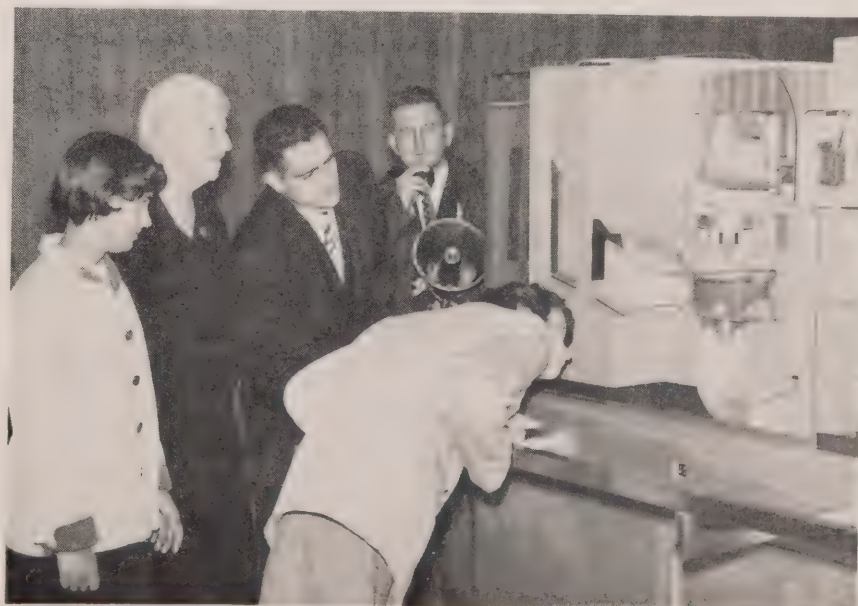
PUPIL VISITORS

ACCOMPANIED by principals and teachers, as well as by representatives of the South Peel Board of Education and municipal Hydro officials in Toronto Township and Port Credit, 65 pupils from schools in Toronto Township have visited Ontario Hydro's St. Lawrence Power Project in recent weeks.

Three separate tours were arranged for these pupils who emerged as winners of the oratorical contest in which close to 2,000 children participated. Arranged through the co-operation of the local authorities as a reward to the winners, these educational tours enabled the children to see a project which now

ranks as one of Canada's major attractions for visitors.

The third and last group of Toronto Township pupils to visit the project was accompanied by Mrs. Mary Fix, Reeve of Toronto Township, as well as by other local officials. This picture, taken as the last tour was in progress, shows left to right: Miss Joan Franze, Cooksville; Reeve Rix, Bruce F. Russell, South Peel Board of Education, and Ontario Hydro Guide Kenneth Wood (holding the microphone). Another pupil visitor, Michelle Chornenki, Cooksville, displays a particular interest in the working model of the St. Lawrence powerhouse.





DR. R. W. I. URQUHART



DR. DONALD GRANT

DR. DONALD GRANT TO DIRECT HYDRO MEDICAL SERVICES

APPOINTMENT of Donald K. Grant, M.D., as Director of Medical Service, was announced recently by the Commission. Dr. Grant succeeds Dr. R. W. I. Urquhart, who has been named Chairman of the Ontario Hospital Services Commission.

Born in Regina, Saskatchewan, in 1916. Dr. Grant has had a distinguished medical career in both peace and war. After a boyhood spent in a farming community, he attended the University of Saskatchewan, graduating as a Bachelor of Science in 1936. Three years later he secured his M.D. from the University of Manitoba. Following a year in general practice, Dr. Grant joined the Royal Canadian Army Medical Corps in August, 1940, serving with distinction overseas in England, North Africa, Italy and northwest Europe until 1946. Promoted to the rank of Lieutenant-Colonel, he was also mentioned in dispatches and awarded the M.B.E.

After post-graduate training in surgery, on his return to Canada,

Dr. Grant joined Ontario Hydro in 1947 when he was appointed Medical Officer at the Des Joachims development. In 1949, he spent a year at the Commission's Head Office, and was then named Medical Officer at the Sir Adam Beck-Niagara Generating Station No. 2, Queenston. Returning to Toronto in July, 1954, Dr. Grant was made Assistant Director of Medical Services.

Immediate past chairman of the Ontario Medical Association Section of Industrial Medicine, Dr. Grant is also a member of the Canadian Medical Association Committee on Occupational Medicine.

Dr. Urquhart succeeds Arthur J. Swanson as Chairman of the Ontario Hospital Services Commission, which was established in April, 1956. Mr. Swanson will continue to serve the Commission in a consulting capacity.

Dr. Urquhart, who assumed his new duties on December 1, 1958, is widely known in medical circles

having been in the private practice of medicine in Toronto for some 21 years. He is former Honorary Treasurer of the Ontario Medical Association. In 1946 he relinquished private practice to become the Director of Medical Services for Ontario Hydro.

He is a graduate in Arts and Medicine of the University of Toronto, and is certified as a specialist in Internal Medicine. He served in both world wars, latterly with the rank of Lieutenant-Colonel in charge of Medicine, No. 15 General Hospital R.C.A.M.C. Dr. Urquhart is an active member of a number of medical associations concerned with occupational health, and is particularly interested in electrical shock.

Kitchener Sets New Rates for Water, Space Heaters

Kitchener P.U.C., has reduced its flat rate for electric water heaters and adopted a new schedule of 1½ cents per kilowatt-hour for space heaters.

S. E. Preston, General Manager, said the saving to the average consumer on a water heater will amount to a gross figure of 36 cents a month. The gross savings a month amount to 12 cents on a 400-watt heater; 15 cents on a 500-watt heater; 18 cents on 600 watts, 38 cents on 750 watts and 73 cents on 1000 watts.

Lt.-Col. W. J. Green Dies at St. Thomas

Lieutenant-Colonel William J. Green, the "Grand Old Man" of the Elgin Regiment and a former Hydro commissioner died recently at St. Thomas.

He served continuously on the St. Thomas Commission from 1914 to 1932, acting as chairman for several terms. In recognition of his service to the Elgin Regiment, Col. Green was appointed honorary lieutenant-colonel of the Elgin Regiment 27th Armoured in the summer of 1958.

ONTARIO HYDRO AWARDS CONTRACT FOR TWO RED ROCK FALLS UNITS

ORDERS for two generating units for the new Red Rock Falls Generating Station have been placed with the Canadian General Electric Company, the lowest of five bidders. The 38,000-kilowatt plant, authorized early this year and presently under construction on the Mississagi River some 12 miles northeast of Thessalon, Ont., is scheduled for initial service late in 1960.

It is expected that the second of the two units will be in service very early in 1961. Both units are being purchased from the company at a

cost exceeding three-quarters of a million dollars. Delivery of the major components begins in the spring of 1960, and C.G.E. will be responsible for installing and testing the units.

Red Rock Falls G.S. will generate 60-cycle power for the Commission's Northeastern Region. The site of the plant is adjacent to an existing 115,000-volt transmission line from the George W. Rayner G.S. to the Blind River transformer station, which will obviate the necessity of extensive construction of new lines.

Welland Hydro Names New Engineer

Named engineer of the Welland Hydro-Electric Commission recently, Robert E. Young stands near the utility's Hellems Avenue substation. An electrical and professional engineer, Mr. Young was associated in several capacities with Etobicoke

Manager of sales and application engineering for the Canadian Westinghouse Company from 1951 to 1956, Mr. Young left to join an electrical construction firm in Vancouver. There he gained experience in the construction and maintenance of power lines operated by the British Columbia Electric Company. Mr. Young served overseas from 1940 to 1945 with the Royal Canadian Signal Corps. He is a member of the Professional Engineers of Ontario and of the American Institute of Electrical Engineers.

Point Edward Utility Pioneer Passes

David Ross, who was associated with Point Edward Hydro System for several years, died recently.

He played an active role in establishing the first Hydro office at Point Edward in 1939, and took part in the opening of the Point Edward P.U.C. administration building in 1956.

Elected as a Point Edward councillor in 1931, Mr. Ross became Reeve in 1933 and served in that capacity for 11 years. For 13 years he was a member of the committee of council, which formerly administered Point Edward Hydro System.

Brantford P.U.C. Honors Employees

Three employees of Brantford P.U.C. were honored recently for their long and faithful service to the utility.

In recognition of the fact that each completed 40 years' service during 1958, Chairman Walker S. Pettit presented engraved silver trays to: Reginald J. Phillips, Foreman, Meter Department; Miss L. Grace Simington, Accountant, Hydro Department; Miss J. Pearl Miller, Accountant, Water Department.

Harrow Introduces Rate Reduction

Customers of Harrow Hydro-Electric Commission received good news recently when the utility announced that electrical rates would be reduced for the second time in two years.

The new schedule, which took effect on January 1, 1959, provides for a reduction in the initial domestic rate from 3.2 cents to three cents per kilowatt-hour for the first 60 kWhrs. per month and the second rate from 1.6 to 1.5 cents. The third and fourth rates were also decreased, from one cent to .9 cents and from 1.4 cents to 1.2 cents. The minimum bi-monthly bill remains at 83 cents. Rates for commercial and power customers also have been reduced.

Present Certificates to Renfrew Employees

Renfrew Hydro-Electric Commission honored five employees recently when Chairman W. W. Beall presented them with 25-year certificates.

The five, with a combined record of 150 years of service, were: Mrs. L. A. Walker, Secretary-Treasurer, 25 years; Gus Troke, Superintendent, 36 years; John Donegan, powerhouse operator, 30 years; John Anderson, powerhouse operator, 30 years, and Edward Dick, maintenance, 29 years.



ROBERT E. YOUNG

Township Hydro-Electric Commission from 1946 to 1951. Earlier he was a rural area superintendent with Ontario Hydro. Mr. Young obtained his degree in electrical engineering in 1938 from the University of Toronto.

Woodstock Favors 100-Ampere Services

Woodstock P.U.C. has approved a motion requiring the installation of 100-ampere electrical service in all homes erected in that city in the future. The motion was approved after General Manager C. E. Kirkby reported that his interviews with contractors had indicated favor of higher amperage in modern homes. On receipt of applications, the Woodstock P.U.C. will exempt certain smaller dwelling units which could not accommodate a large number of electrical appliances.

Lindsay Lineman Sets Good Army Record



LT. JACK WARD

Best all-round candidate on the Royal Canadian School of Artillery two - week summer course in 1958 was Second Lieutenant Jack Ward, a lineman with

Lindsay Hydro - Electric Commission. Lindsay Commissioners were recently advised by Colonel J. W. D. Symons, Commandant of the Royal Canadian School of Artillery of Lieut. Ward's record while taking the Reserve Army Course at Shilo, Manitoba.

FORWARD LOOK

(Continued from page 32)

ature, direct advertising aid as well as general publicity. He earned a gold medallion, which was permanently affixed to the house, and received appropriate certificates.

"Concurrently with the electric heating promotion, we instituted a budget billing plan. Briefly this is a system for equalizing payments over 11 months with an adjustment period in the 12th month. Included are all charges for electricity except water heaters. We call it 'budget billing for electrical living', and put emphasis on the fact that the bill covers all electrical living, of which electric heating is only a part." ■

CALENDAR OF EVENTS

SEVERAL organizations associated with the electrical utility field have announced dates for meetings and conferences during 1959. The following events will be of interest to readers of *Ontario Hydro News*:

Feb. 1	Annual Meeting, Association of Professional Engineers of Ontario, Toronto;
Feb. 8-14	"National Electrical Week";
March 15-18	O.M.E.A.-A.M.E.U. 50th Annual Meeting, Royal York Hotel, Toronto;
April 21-22	A.M.E.U. Eastern Region Annual Meeting, Kingston;
April 24	A.M.E.U. Past Presidents' Dinner — Territories Room, Royal York Hotel;
May 29	A.M.E.U. West Central Region, Brantford;
June 8-10	Engineering Institute of Canada, Toronto;
June 24-26	C.E.A. Convention, Murray Bay, Quebec;
July 2-4	A.M.E.U. Summer Technical Conference, Bigwin Inn;
July 2	Annual Meeting, Electrical Utilities Safety Association, Bigwin Inn;
Sept. 8-9	Georgian Bay Municipal Electric Association, Delawanna Inn, Honey Harbour;
Sept. 16	Grand Valley Municipal Electric Association—Galt;
Sept. 30-Oct. 2	C.E.M.A. Annual Meeting Niagara Falls.

(Courtesy of the A.M.E.U.)

CREDIT TO HUMAN FORESIGHT

(Wingham Advance Times - Nov. 12, 1958)

(See page 21)

IN this day, when every paper and news report is filled with the sad tale of man's increasing harvest of accidents and violent death and injury it was refreshing to attend the Hydro dinner last week when the Wingham Rural Hydro office staff celebrated the completion of 1,000 accident-free days.

Such a record is particularly noteworthy when the organization concerned not only is subject to all the hazards which face a normal industry but must deal at all times with the added dangers of exposure to electrocution.

Accidents can and often do occur with shocking suddenness where electrical workers are engaged, as families of victims in years past can well testify. It is for this reason, of course, that Hydro's management and workmen themselves are perhaps more than ordinarily conscious of the need for constant vigilance in everything they do, whether it be working on a "live" line or merely driving back to headquarters in the truck.

Despite all the emphasis which has been placed upon the need for greater safety awareness, there still seems to be all too many places where we can end our careers as the result of our tremendous technical progress. Congratulations are most certainly in order for the Wingham area staff of Ontario Hydro, where the trend has been so successfully reversed.



SO EASY **even a man can use it**

There's no trick at all to washing with an automatic electric washer. Just toss the clothes in and set the dial. The automatic electric fills itself, empties itself . . . gives clothes as many rinses as you've indicated on the dial. Clothes come out thoroughly washed and rinsed, ready for the drier—automatically! Which just goes to prove "You get more out of life when you get the most out of electricity."

live better...ELECTRICALLY
the safe, clean, modern way!

(Sample advertisement—made available to the associated municipal utilities for use in local "Live Better Electrically" campaigns.)



**Robert H. Saunders - St. Lawrence Generating Station
which was officially opened on September 5, 1958**

5D
SCIENCE AND MEDICINE DIVISION



ONTARIO HYDRO NEWS

FEBRUARY

1959



ONTARIO HYDRO NEWS

FEBRUARY, 1959

VOL. 46, No. 2



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COVER "SHOTS"

Our front cover this month salutes the St. Lawrence Seaway, which will open a "new" route into the industrial "heart" of North America. In striking contrast is the winter impression of an Ontario golf course — minus the golfers — on the back cover.

CAUTION OR CHAOS

IN the past quarter-century, particularly since the end of the Second World War, Canada's economic structure has undergone a rapid and a remarkable transformation. During this period, the tempo of the nation's industrial and manufacturing activity has accelerated and finally surpassed the level of agricultural production.

While it may be argued, with some justification, that native ingenuity and foresight have been contributing factors in this change, the plain fact is that Canada's economic development is due, in a much greater measure, to the fortuitous combination of a stable political and monetary system and a vast and readily available array of natural resources.

These rich reserves of raw materials—many of which have, in the past, been in relatively short supply—have led inevitably to a substantial investment of foreign or outside capital in industrial and manufacturing enterprise. And so the world has watched in admiration while this nation has advanced to fourth position among the trading nations of the world.

Today, Canada's economic structure, and, therefore, the welfare and prosperity of virtually every Canadian, is dependent, to a preponderant degree, on the export of many basic commodities. For it should be patently obvious that Canada's relatively small domestic market cannot possibly absorb the entire output of her mines, her pulp and newsprint mills, or her still highly active agricultural industry.

There are disturbing signs, however, that Canada's trading relations with other nations, as well as the value of the Canadian dollar, are being seriously affected by an inflationary wage-cost trend. In fact there have been repeated warnings from responsible sources that Canada, in common with the United States, is literally being priced out of the export field. As recently as January 29 this year, James Muir, Chairman and President of the Royal Bank of Canada, told a Vancouver audience that "our prices are inflated to a point of explosive danger."

Canada's pride in the long-cherished completion of the St. Lawrence Seaway later this year will be tempered by the sobering realization that Canada's mercantile marine fleet is practically non-existent today. Only a few months ago we witnessed the distressing spectacle of what could be termed the last Canadian merchant vessels awaiting transfer to foreign registry. The reason: Canadian ocean freighters can no longer compete with foreign shipping companies because of higher operating costs. That Canada's merchant fleet stood fourth in the

world in 1945 only serves to stress the disastrous results of failure on the part of one segment of Canadian labor to face economic facts.

But an even more deadly effect of the wage-cost spiral is the persistent erosion of the purchasing power of Canadian currency. It has been reliably estimated that the Canadian dollar, under present conditions, loses approximately 2.4 per cent of its value every year. In fact it lost 3.2 per cent in 1957.

Consider the impact of this trend on a pension of \$300 a month by 1989. If the present spiral continues at its present rate, that monthly pension of \$300 will then be worth only \$145.

The proud nation of France stands as an example of the awful effects of inflation. A Canadian dollar today will buy 500 French francs. Around the turn of the century it was equivalent to five francs. A current magazine article points out that scores of French people, who invested in Liberation Bonds in 1944-45, are getting the same interest as they did 13 years ago, even though the cost of living is 10 times what it was in the post-liberation period. If these people were to sell their bonds today, they would get only one-half of what they paid in 1945—and in devalued francs!

These facts underline the growing number of appeals for an immediate return to the fundamental objectives of increased productivity and lower costs. The remedy is neither simple nor easy. Primarily it requires an intelligent appraisal of the entire situation and responsible leadership in the field of labor relations.

It is of paramount importance that everyone associated with the Hydro enterprise in Ontario have a clear understanding of Hydro's inherent obligation to the citizens of this province to supply power at the lowest possible cost consistent with good service. The practice of careful economy and its beneficial effects in holding power costs to the lowest possible minimum is in keeping with this obligation, and is of inestimable importance to the associated municipal electrical utilities, many of which are now exploring every means of extending the scope and benefits of Hydro service to an increasing number of customers.

Unanimous recognition, on the part of every member of the Hydro family, of the wisdom and continuing necessity of helping to stem inflationary trends will contribute materially to the preservation of the standard of living to which we have become accustomed. Failure to recognize this need can only react to the detriment of us all.

Conquered and harnessed,



ST. LAMBERT LOCK at Montreal, two miles upstream from the Seaway entrance, is one of seven locks in the new St. Lawrence canal system. This installation — one of five built by Canada — has a lift of 15 feet and a minimum width of 200 feet.

THIS SKETCH from the Ontario archives depicts work on the old Williamsburg-Cornwall canal, which was enlarged to a 14-foot depth between 1876 and 1900. Men and horses did the work then, in contrast with modern methods.



Lawrence gets ready for a greater role in North America's history

RIVER OF DESTINY

JACQUES Cartier, the intrepid and colorful French explorer of the 16th Century, did not find a North-west Passage to the Orient or the riches of Cathay.

He found instead a hostile wilderness. He discovered, too, a mighty river and named it the St. Lawrence. His dream thwarted by rushing rapids, later designated Lachine (China), he turned back to France in bitter disappointment.

In the questing spirit of the age, other men—Champlain, Frontenac, LaSalle and others—followed Car-

tier up the St. Lawrence. And so were laid the foundations of New France.

Then came the years of war and the storming of the Citadel of Quebec by the British general, Sir James Wolfe. When peace returned beneath the new flag, the St. Lawrence began again to serve the progressive pursuit of trade. The long, unwieldy batteaux, products of native ingenuity, transported the commerce of the slowly-developing nation, Canada, where roads were still unknown. But, like Cartier, their

path was obstructed by the formidable barrier at Lachine.

From this need for a clear water route between Montreal and up-river outposts, sprang the first in a series of canal developments. The first recorded improvement in the long history of navigation on the St. Lawrence River dates back to 1700, when a 1½-foot canal was constructed at the Little River St. Pierre near Lachine. Since that time there has been a steady development of canal facilities—2½ feet, 5 feet, 9 feet in some places, and

(Continued on page 4)

(Power Authority of the State of New York).

AERIAL VIEW of the power project area showing the two new locks and canal on the American side (left), which carry ships around the powerhouses as well as Long Sault dam.





(McNamara Construction Co.)

TWO FREIGHTERS enter one of the locks of the Welland Ship Canal (upper photograph). In the lower view, deepening of the Lake Erie end of the canal is underway at Port Colborne, Ont.

then a deepening to 14 feet. In this evolutionary process, such names as Soulanges, Beauharnois, Cornwall, Farran's Point, Rapide Plat and Galop are inextricably linked with that of Lachine.

Farther west, a forceful visionary, William Hamilton Merritt, in 1829, succeeded in his efforts to overcome the barrier of Niagara Falls by creating the first Welland Canal. Some 40 years earlier, other men had thrust aside another obstacle to waterborne traffic in this new land. The Northwest Fur Company, in 1790, built a canal to bypass rapids at Sault Ste. Marie so that their bales of beaver pelts could reach the European hat-makers with greater ease. Thus was the Great Lakes system first opened to the shipping of the world.

History's pages now record a quickening of Canada's economic pulse. Her industrial growth, accompanied by a steady but invincible advance to a leading rank among the trading nations, led inevitably to an expansion of the Great Lakes ports and a notable increase in cargo tonnages.

The status of the St. Lawrence-Great Lakes system as one of the great water traffic lanes in the world came into sharper focus as men on both sides of the international border began to advocate the deepening of the whole inland waterway to a maximum depth of 27 feet.

14-foot Bottleneck

Their proposal to remove the 14-foot bottleneck between Montreal and Prescott (and concurrently the provision of deeper channels between Lake Ontario and Lake Erie) was met with derision and active opposition. Gradually resistance weakened. Finally Canada and the United States reached agreement.

In August, 1954, Ontario Hydro and the Power Authority of the State of New York officially began

construction of adjoining generating stations and associated works in the International Rapids section of the St. Lawrence west of Cornwall.

Shortly thereafter the St. Lawrence Seaway Authority (a crown corporation established to construct and administer the Seaway navigation facilities in Canadian waters) and its U.S. counterpart, the Saint Lawrence Seaway Development Corporation, began work on the vast Seaway development.

Today the world watches in keen anticipation as the four agencies move toward the final stages of these massive engineering projects.

In the last four years a remarkable transformation has been taking place as the Seaway organizations proceeded with replacement of the 21 Canadian locks that have linked the various sections of the St. Lawrence canal system for more than a half-century.

Present estimates indicate that the total cost of re-shaping the Great Lakes-St. Lawrence system will run to a total of \$471 million. Canada's share of it, contrary to popular conception, is approximately \$340 million compared with U.S. expenditure of \$131 million.

Seven new locks with a usable length of 730 feet and 80 feet wide—five on the Canadian side and two on the American—have been constructed to lift ocean and lake freighters from Montreal to Lake Ontario.

Meanwhile scores of dredges have been busy scooping up the bed of

the St. Lawrence in the same 183-mile area.

A new 20-mile-long canal will carry navigation around the Lachine Rapids above Montreal. In this area, too, extensive bridge, harbor and other transportation modifications have taken place.

In the Soulanges Section, between Lake St. Louis and Lake St. Francis, the new Seaway will make use of the 16-mile Beauharnois power canal, which was excavated to a 27-foot depth many years ago in anticipation of the deeper waterway plan.

Power and Navigation Works

The International Rapids Section includes the site of the Ontario-New York power project and several major Seaway installations.

From a technical standpoint, the power and navigation projects in this section are integrated, with the engineering features of each dependent upon the other. However, they have been financed, built and are being operated as two distinct entities. The power project, incidentally, was the more costly of the two, representing an expenditure of \$600 million.

The essential navigation works in this area consist of two canals, one on Canadian territory at Iroquois, Ont., with one lock to bypass the control dam, the other on American territory opposite Cornwall (with two locks) to bypass the powerhouse.

The St. Lawrence Seaway Authority has built the lock and canal



at Iroquois, while its American partner was proceeding with construction of the canal and two locks* (one at Grass River and the other at Robinson Bay). Thus ships proceeding upstream enter the Snell Lock at Grass River, bypass the powerhouses and enter Lake St. Lawrence (which was created by the power development) above the Eisenhower Lock. Then they proceed by the indicated channel to the Iroquois Lock where they are lifted to the level of the Thousand Islands Section, and proceed by newly-dredged channels into Lake Ontario.

In the Welland Ship Canal, which bisects Ontario's lush Niagara Peninsula for a distance of some 27 miles, deepening projects have been carried out at various points for a distance of some 10 miles.

(Continued on page 6)

* (Exemplifying Canadians' confidence in the future of the Seaway, provision has been made for possible later construction of two additional locks on the Canadian side. These additional locks would permit traffic to pass through the entire St. Lawrence Seaway using Canadian structural facilities only).

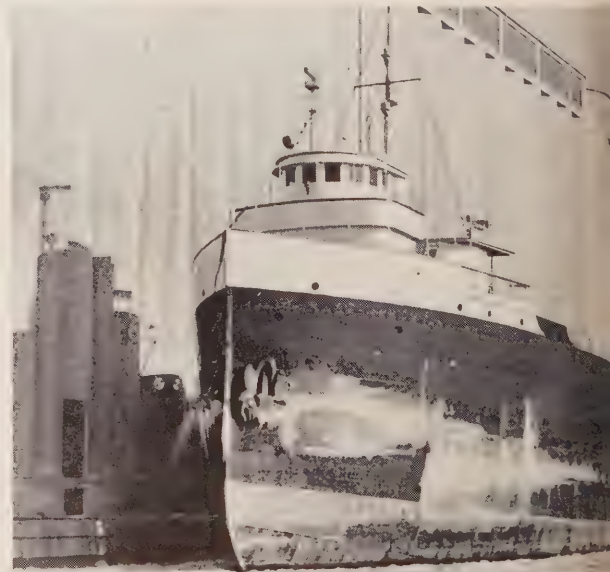


PROFILE VIEW OF THE ST LAWRENCE — GREAT LAKES AREA.



TORONTO'S HARBOR FACILITIES are being enlarged and improved to meet the requirements of larger vessels and increased overseas shipments. A shallow-draft ocean freighter is moored at the Queen City's large Terminal Warehouse in the foreground.

WHEN the Seaway is completed later this year, large lake freighters like this one will be able to sail directly from Fort William and Port Arthur to Montreal without transferring their heavy cargoes to rail transportation or smaller ships.





Thus the long-awaited day when 70 per cent of the world's ocean freighters can move into the Great Lakes is approaching a reality. Soon lake vessels up to 25,000 tons will be able to travel between the Great Lakes and ports along the lower St. Lawrence where only birch bark canoes could pass in Cartier's day.

Many Benefits

Seaway protagonists, and they are numerous, can point to many benefits which this great new inland waterway will bring. Their confidence is reflected in the substantial expenditures for the improvement of facilities in such Great Lakes ports as Toronto to meet the requirements of greater traffic and larger ships. Current estimates place the total cost of these harbor projects in Canadian and United States ports adjacent to the Seaway at \$100 million.

Lower shipping costs are cited among the major factors influencing greater use of the Seaway on completion. These costs will be reduced in several ways, harbor officials claim. For instance, the operating cost per ton of capacity will be lowered owing to the larger size of the vessels. The expense of cargo trans-shipment to smaller vessels or rail transportation will be largely eliminated. The risk of damage, weight losses or deterioration (an inherent possibility in cargo transfer) will be minimized, while substantial

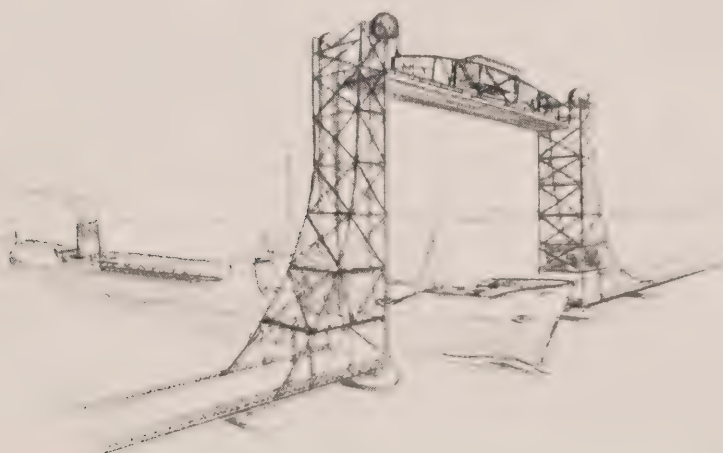
time savings will further reduce shipping costs.

Naturally the largest tonnage will be represented by cargo movements between Canadian and American ports, but estimates suggest that the volume of direct overseas shipments will be five times greater within a decade.

This prediction is justified by the fact that the area bordering the St. Lawrence-Great Lakes waterway comprises what has been described as the greatest concentration of industry in the world. More than 60 per cent of all Canadians live in the Provinces of Ontario and Quebec, which adjoin the Seaway. Sharing a large portion of the country's abundant resources, it is not surprising to find that these two provinces account for nearly 80 per cent of Canada's manufacturing and processing output.

On the American side, the eight states adjacent to the waterway possess 35 per cent of the nation's total population, while almost one-half of the U.S. exports of non-agricultural products to overseas markets originate in the Great Lakes Basin.

And so the St. Lawrence River—its energies harnessed, its rapids controlled or circumvented—stands ready to carry a new stream of international traffic, greater perhaps than any man can foresee. — *by the Editor.* ■



*Maybe it's not for "southern softies,"
but Canada's winter season spells*

Picturesque Mount Revelstoke National Park is one of British Columbia's most inviting ski terrains.



FUN and GAMES



FROM COSY CABINS like this one near Huntsville, skiers head for some of Ontario's finest ski slopes. Practically every community in the province has its own ski club.

HIGHLIGHTING the Quebec City Winter Carnival is a boat race across the ice-infested St. Lawrence River. This year's carnival attracted crowds between January 31 and February 10.

WHEN winter's first snowflake falls, some Canadians turn their eyes southward to the warmer skies of Florida and California or perhaps to the palm-girt beaches of the Caribbean.

But for thousands of Canadians, winter's bright sunny days and an abundance of sparkling snow provide the perfect setting for fun or relaxation.

Snow and ice, of course, are the prime ingredients for winter fun, and you find plenty almost everywhere you go in wintertime Canada.

As early as November in the Province of Quebec the snow depth is about three inches year after year, and reaches a maximum of more than 30 inches in February. It maintains a 15-inch level even in the middle of March.

In Ontario, too, snow conditions are consistently good. Even Toronto, so near to New York State, gets better than 61 inches in an average season, and in the more northern regions of the province powder snow is constant through March.

The Canadian Rockies have an annual snowfall of 130 inches, and if you have an eye for scenery the shining beauty of these giant mountains towering in the winter sun is unsurpassed anywhere. They have long been noted as the North American center of Alpine skiing. Powder snow lies 20 feet deep among the rugged snow-clothed peaks and in the deep valleys, and spectacular two-mile downhill ski courses are commonplace. From December through March—even in some areas until the end of April

(Continued on page 10)

MANY OF ONTARIO'S large lakes and bays are as popular in winter as they are in summer—particularly with the "ice-boaters."



the swish of skis can be heard on the mountain slopes of Alberta and British Columbia.

Head For Ontario

Snowtime visitors, too, are heading for the famed Laurentians of Quebec, Montreal, Quebec City and Lac Beauport nearby. Many choose Ontario, where Toronto and points north are favored.

Practically every city and town in Ontario has its own ski club and visitors are always welcome to join in the use of their facilities. Popular ski regions in the southern and north-eastern sections of Ontario include: Bracebridge and Huntsville in the Muskoka District, Collingwood, the Haliburton High-

lands, Sault Ste. Marie, North Bay, Sudbury, Midland, Peterborough, and Orangeville. Port Arthur, Fort William and Kenora are active ski-centers with modern facilities in the northwestern section of Ontario.

The Gatineau Hills of Quebec, near Ottawa, and the boundaries of Ontario, provide good skiing at Camp Fortune, Kingsmere, Wakefield, Maniwaki, Fairy Lake and Ironsides. The Gatineau—a region little known to U.S. skiers—is easily accessible from the Canadian Capital and plenty of first-class accommodation is available around the city and its environs.

Elsewhere in Eastern Canada there's skiing to be found in parts of New Brunswick around Saint John,

and in Nova Scotia's Wentworth Valley and Sydney.

The "Roarin' Game"

While skiing is the chief attraction, a wide variety of winter activities swell the Canadian population with visiting sportsmen. Curling, the "roarin' game", imported from Scotland, has its many devotees, and there is skating, sledding, ice-fishing, ice-boating, ski-joring, hockey or hiking through the woods on snowshoes. Others are attracted by the fascinating winter carnivals, the wonderful opportunities for photography or just the stimulating climate.

Many areas in Ontario have ardent followers of curling, ice-boating, ice-fishing and the local



△

PERHAPS there's a future "Maple Leaf" or "Canadien" among this group of young Fort William hockeyists. Open-air rinks provide a valuable training ground for young players.

(Photographs by courtesy of the Canadian Government Travel Bureau and the Ontario Department of Travel and Publicity).

▷ "WI BESOM AND STANE!" During the present winter season, Ontario's enthusiastic curling clubs are sponsoring some 75 bonspiels.

hockey teams. Toronto fans are as devoted to their Maple Leafs of the National Hockey League as the followers of the Montreal Canadiens. Other centres give an equally spirited backing to the semi-pro or amateur hockey clubs of their own leagues. From villages to the larger cities there are ice-carnivals at community rinks in which young and old get together for games and entertainment. Perhaps the fathers will take on the youngsters in broomball, a game played on ice without benefit of skates, and using a broom in lieu of a hockey stick and a volleyball or similar object to replace the puck. The games and entertainment vary with the communities but the spirit of having fun is always the same. ■





THIS HANDSOME, all-electric home at Oshawa, Ont., received a Medallion award last year in recognition of its wiring standards. The performance of its electric space heating equipment is being tested this winter.

THERE never has been any doubt about Ontario citizens' liking for comfort living. One of the proofs can be found in the fact that the average annual per capita consumption of electricity in the province—5,553 kw-hrs in 1957—ranks among the highest in the world.

So it's not surprising, then, to find a mounting interest in a relatively new application (new in Ontario, that is)—electric space heating.

Ontario Hydro had scarcely made its announcement in mid-1958 of the removal of the restrictive service charge, and the establishment of a new rate schedule for electric heating before the Commission and municipal utilities were literally besieged with enquiries. And it wasn't too long before installations were being made in several Hydro communities.

Today, less than a year later, numerous homes, offices and commercial establishments across Ontario are operating new types of electric space heating equipment. Demands are still pouring in for technical data and general information about the possibilities of this type of heating, which, some say, resembles "the heat of the sun."

Already there are indications that all-electric homes are in the plan-

ning stage wherever Hydro lines are found in Ontario. School boards are investigating the possibilities of electric space heating for new structures. Contractors contemplating or undertaking erection of new apartment buildings are consulting with architects and utility officials on the subject. New motels in several areas are being equipped with electric space heating units.

While this widespread interest is encouraging, utility representatives recognize that Ontario has a long way to go in matching its sister Province of Quebec in electric heating installations. There have been important and far-reaching developments in this field, too, throughout the United States, as well as in the United Kingdom and several European countries. Indicating how electric space heating is catching on in the United States were the results of a survey conducted recently by *Electrical World*, a U.S. electrical industry trade magazine. Among other things, the survey revealed the interesting and surprising expectation that one million Americans will be living in all-electric homes by 1960 and a further two million a decade hence.

Ontario electrical utilities visualize this infant application as an exciting opportunity for increasing their energy sales. Their enthusiasm

was manifested in concrete fashion at the A.M.E.U. Institute of Electrical Space Heating early in November last year when some 250 utility and allied industry representatives participated in Ontario's first organized technical forum on this subject (see *Ontario Hydro News*—December, 1958; January, 1959).

Oshawa Tests

Then, too, they are following closely the results of tests being made on a new heating installation in an Oshawa, Ont. home. This model home was built to Gold Medallion specifications, which indicates that it contains top-quality electrical capacity and equipment. In collaboration with the Commission's Consumer Service and Research Divisions, the Oshawa Public Utilities Commission, with the aid of graphic indoor and outdoor meters, is studying the performance of this particular electric heating installation. The data collected will serve as a valuable guidepost for future electric heating units—and possibly structural designs—in areas having climatic conditions similar to Oshawa.

This is only one type of equipment under the scrutiny of Ontario's utility staffs. A monthly survey is

*Province-wide Commission survey indicates
growing popularity of electric heating*

IT'S HERE TO STAY

BY HORACE BROWN

being conducted by Ontario Hydro representatives in each of its nine regions. The results are being collated by the Consumer Service Division staff at Head Office.

Kingpins in the promotion of electric space heating are, of course, Hydro's regional consumer service engineers and their staffs, who have daily contact with the Commission's 103 rural operating area officers and the 354 associated municipal utilities.

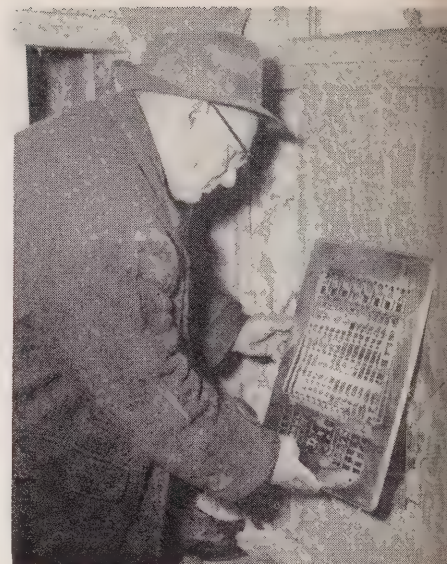
Particularly active is the Western Region, which will have some 400 electric space heating installations by the end of 1959 according to an estimate by Manager R. M. Laurie last fall. The region's new Space Heating Supervisor, W. L. Scott, already has been instrumental in arranging a conference of Western's area managers where several manufacturers had equipment on display. Also stimulating enthusiasm, several area meetings of electrical contractors, dealers and allied industry representatives have considered both the possibilities and the technical problems inherent in this new electrical application.

The Commission's survey of new installations indicates four, all-electric homes in the Western Region,

(Continued on page 14)



THESE PHOTOGRAPHS of the interior of the Oshawa home (opposite page) confirm that electric space heating units conserve space. The temperature of each room can be individually controlled by small, unobtrusive thermostats.



A NEW HOME in Blossom Gardens subdivision at Cooksville, west of Toronto, was opened for public inspection during National Electrical Week (February 8-14) this year. George W. Pattison (right), builder of this pioneer Ontario all-electric subdivision, studies plans for the model dwelling in the photo on the left. On the right he examines the electric space heating unit before it was installed in the bathroom of the well-insulated residence.

either completed or in the construction stage. At Amherstburg, Ont., one home is completed and occupied, while another near Chatham is receiving the contractor's finishing touches. Two in the London area—one a Gold Medallion home—are now under construction. The London Board of Education is reported to be given serious consideration to the installation of space heating in a projected collegiate structure, while an apartment building, a new motel and an office building—all with electric heating facilities—are in the planning stages in that city.

In the Toronto Region, many enquiries are being received at Hydro's area offices and by municipal utilities in such growing communities as Richmond Hill, Markham, Oakville, Toronto Township, Scarborough Township, North York Township, Aurora and Newmarket. In a subdivision at Cooksville, west of Toronto, a builder has completed an electrically-heated, custom-built home. Now he's proceeding with a model, all-electric home which is designed to meet Gold Medallion standards. This home was opened

for public inspection on February 9, coinciding with the observance of National Electrical Week.

Another instance of growing public interest was noted recently when members of the Aurora Board of Education, with another school on the planning boards, called on representatives of Hydro's Consumer Service staffs for guidance and information.

Builders Favor New Units

Builders in the Georgian Bay and Northeastern Regions are showing keen interest in the new development. James Hurst, an electrical contractor recently finished a new, all-electric home for his own use on the 12th Concession of Oro Township in the Barrie-Orillia area. Already he is enthusiastic about electric heat, having indicated publicly that the equipment is economical to install and operate. Further installations in the vicinity of Sudbury and North Bay are expected to act as valuable tests for the new type of electrical equipment.

Activity in the East Central Region has centered mainly in the City of Oshawa, site of the pilot project previously mentioned. Virtually completed is a new home where electrical space heating equipment will be served by Ontario Hydro's Oshawa Area system. Two stores in the Motor City are using electric heating units, while installations for one or two new Oshawa schools are under consideration.

The new headquarters office and service building of Ajax Hydro-Electric System (see *Ontario Hydro News*—December 1958) is now using electric energy as the sole source of heat. The new structure is equipped with a low-pressure, hot water system, with baseboard radiation and automatic, indoor-outdoor thermostatic control. Water is heated by six, 20-kilowatt units operating at 208 volts. The system will maintain the necessary temperature for periods of four hours, thus permitting the use of off-peak energy.

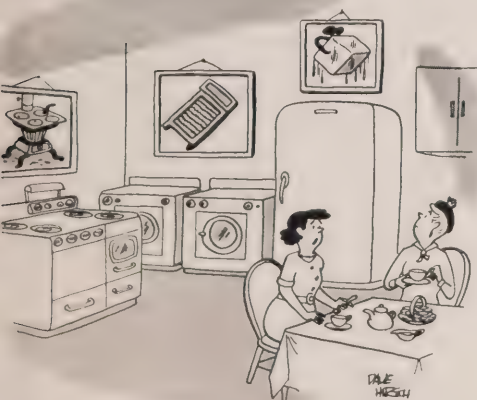
Farther east, the Commission's Eastern Region reports that an Almonte contractor has built a large

home equipped with electric heating facilities. This installation incorporates glassheat panels with total rating of 22 kilowatts. In the Cornwall-Morrisburg area, three motels have sought advice on the question of converting to electric heating units, while the Ontario-St. Lawrence Development Commission is considering the possibility of using electricity to heat the historic buildings that comprise Upper Canada Village near Morrisburg.

Regarded as one of the latest types of electric heating, is an experimental, 18-kilowatt installation now under test at the Toronto home of Hydro Research Division engineer, Barney Kellam. Basically speaking, this test installation is a storage-type electric furnace incorporating a chemical compound that stores heat during off-peak hours and distributes it as required. Installed during January, 1959, the equipment is being subjected to rigorous tests to ensure that it measures up to the requirements.

Meanwhile the Commission is demonstrating its confidence in electric heating by authorizing this type of equipment for two of its new rural area offices to be erected shortly at Beachville and Dundas.

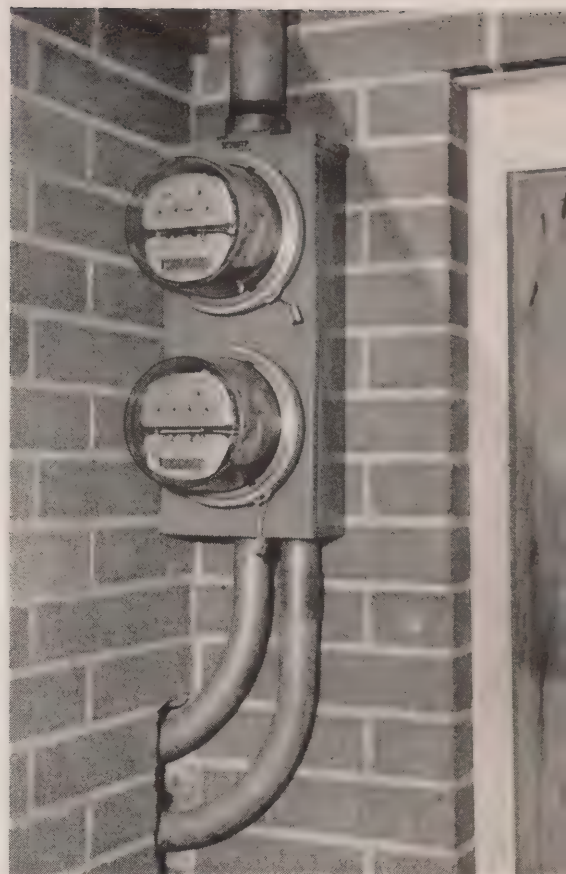
And so, the stage is being set for another phase of Ontario's electrical age. ■



George never lets me forget what a good provider he is."

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WHY TWO METERS?



Ontario Hydro's announcement in 1958 of the cancellation of the restrictive service charge of \$4 a kilowatt per month was supplemented by the establishment of new rates for electric space heating in accordance with the following conditions:

The energy used for all forms of electric space heating for commercial and power services will be included with the normal load, and billed at the standard rate applicable in each case;

For domestic services, electric energy used to heat a portion of a dwelling not exceeding 25 per cent of the floor area will be included with the normal load, and the customer's entire use of energy will be billed at the standard rates applicable;

Electric energy used to heat the entire dwelling or a portion of a dwelling in excess of 25 per cent of a floor area will be metered separately, and billed at a special house heating rate. For Ontario Hydro's rural customers, this house heating rate will be 1.5 cents net a kilowatt-hour. For municipal utility customers, the house-heating rate will be established by the municipality and the Commission at a rate not less than 1.5¢ a kw.-hr.

The two meters in the accompanying picture have been installed in a new all-electric home at Cooksville mentioned elsewhere in this article.

ONTARIO'S IRON CAPITAL

AERIAL VIEW of Ontario's busy iron community. Atikokan's C.N.R. and ore-gathering yards are visible (left foreground).





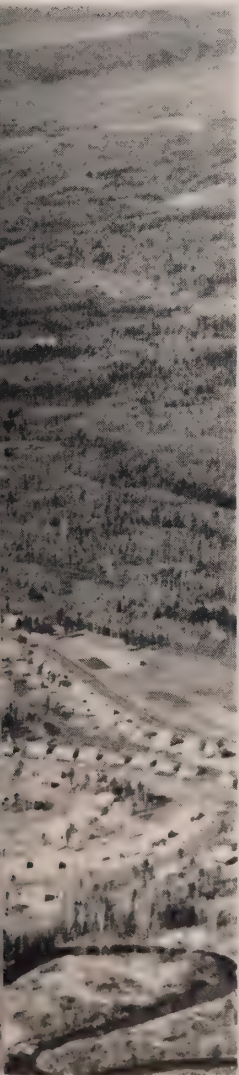
NO GLOOMY frontier town, Atikokan's main street at night is ablaze with a colorful array of electric signs and lights.

THIS GIANT DREDGE is removing silt and water from the bed of Steep Rock Lake as a preliminary to actual mining of another of the iron ore deposits discovered in 1938.



**Atikokan--a township that
traded a lake for an iron mine**

BY PETER MAITLAND



ATIKOKAN, which can readily qualify as a contender for the title of Ontario's "iron capital," owes its bustling prosperity to what might be termed one of the most unusual "swaps" in history—it traded a lake for an iron mine.

Situated 140 miles west of the Lakehead on the Canadian National Railway's main line between Port Arthur and Winnipeg, Atikokan, (Indian for caribou horns) in the 1930s, was a sleepy railway divisional point and outfitting centre for sportsmen going into Quetico Provincial Park and adjacent regions. Its population was 300.

Now incorporated as a township, Atikokan today has a population of just under 7,000 (1957 census), a municipal budget of almost \$1,000,000 and unlimited prospects for the future.

The magic wand which accomplished this rapid change in the fortunes of the community, was fashioned from iron—millions of

tons of rich, high grade ore at the bottom of Steep Rock Lake, some five miles north of the railway line.

With the development of this mighty iron range, which entailed pumping out portions of the 300-foot-deep lake, came prosperity.

According to local legend, the late Major-General Donald M. Hogarth, then President of Steep Rock Iron Mines Limited, which initiated development of the iron range, once went fishing with a guide on one of the many lakes surrounding Atikokan. General Hogarth was enthusiastic about the size of the fish he was pulling in until the guide, with a deprecating look, remarked drily: "They're not much. You should have seen the ones I used to catch in Steep Rock Lake until some 'so-and-so' went and pumped it out."

Whether the guide is legendary or not, his attitude is hardly representative of the community's general

(Continued on page 18)

feeling towards the economic growth of the area. Few people living in Atikokan today have misgivings about the exchange of a fish-filled lake for an industry, which, at its peak last year, employed some 1,100 workers.

Department stores, selling everything from fur coats to fishing tackle, restaurants, banks, variety stores, automobile dealers and a host of other businesses housed in modern buildings along the broad streets of Atikokan's business section cater to the needs of the well-planned community. The pages of the local telephone directory list everything from accountants to watch repairmen.

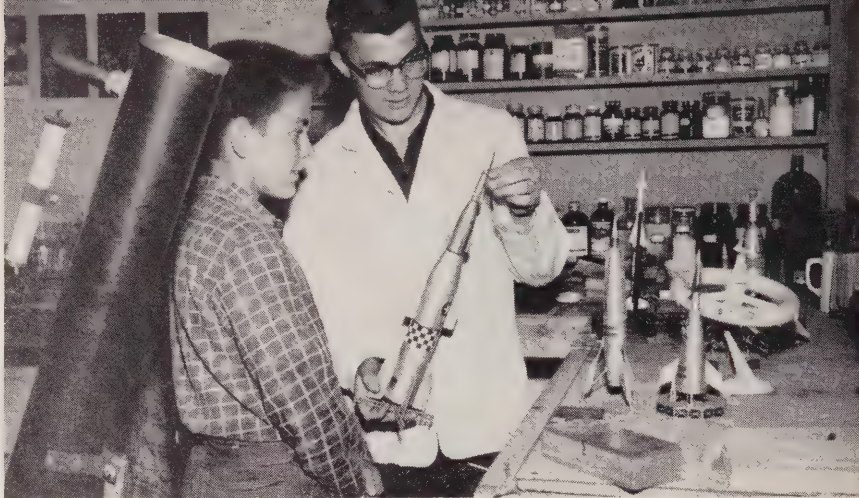
Metropolitan Atmosphere

Neat sub-divisions with curving avenues and modern homes are indistinguishable from suburban areas in metropolitan sections of the province.

Atikokan also can boast of four service clubs, a 150-member Chamber of Commerce, three hotels, nine churches, a movie theatre, seven schools, a 32-bed hospital, a new post office, a bowling alley, curling and badminton clubs, and a dial telephone system.

A \$7,500,000 provincial highway, completed in 1950, connects the township with the Lakehead, and surveys are now underway for the extension of the highway to Fort Frances, 90 miles west on the border between the United States and Canada. Atikokan is already a popular area for sportsmen and campers, and the completion of the new road link promises to make Quetico Park and the surrounding area a major tourist attraction.

Although the new Atikokan owes its existence to iron, electric power supplied by Ontario Hydro has played a vital role in its rapid growth. In 1943, one year before the first payload of ore was hauled up from the lake bottom, the Commission built a 115,000-volt transmission line into the area from Port Arthur. A 30,000-kva. transformer station was built at Moose Lake, overlooking



RONALD EYTON, 1958 President of the local teenage science club (right), demonstrates a ballistic missile model to his younger brother, Terry.



HYDRO'S former Atikokan Area Manager Stan. Roslyn (left) and Atikokan Township Hydro Commission Manager Marvin Kelly examine one of the new mercury vapor lamps used in the recent street lighting program.

Steep Rock Lake, to supply stepped-down power for the dredging and mining operations. In 1955 a second 115,000-volt line was built to cope with increased power demands and to augment the transmission system throughout the area.

Hydro Committee

Power consumption in the township continued to increase and a committee was set up by the township council to study the possibility of buying the local distribution system from Hydro. As a result of these investigations, the question of buying the system was placed before the voters in June, 1956. They approved, and authorized the borrowing of \$400,000 for the purchase.

In September that year the township signed an agreement with Ontario Hydro to purchase the distribution system and a supply of power.

Under the terms of the contract, the Ontario Commission continues to supply power to Steep Iron Mines Limited and Caland Ore Company Limited, joint developers of the Steep Rock Range.

Atikokan became a member of the Hydro Family on December 18, 1956, with the final reading of a by-law establishing the Hydro-Electric Commission of the Township of Atikokan.

Chairman W. A. (Bill) Ferguson and Commissioners James Arthur and J. A. (Sandy) Johnston, Township Reeve, have been members of the Commission since its inception. Marvin Kelly, Manager and Secretary-Treasurer, was appointed in 1957.

Although the Commission has an office staff of four, outside work is



△
MEMBERS of the Atikokan Hydro Commission (left to right): Manager Marvin Kelly, Chairman W. A. Ferguson, Commissioner James Arthur and Reeve J. A. Johnston, survey the site of a future utility service centre on the townsite's outskirts.



▷
MRS. THOMAS RAWN, wife of the "father" of Atikokan who vanished during a prospecting trip in 1945, is one of the community's best known residents. She came to Canada from Scotland in 1912, and has vivid memories of the pioneer days in northern Ontario.

handled by the Ontario Hydro area work force on a cost basis.

As of December, 1958, the Atikokan Commission had 1,714 domestic, 103 commercial and 26 industrial customers. The local system is supplied from three sub-stations over 22 miles of distribution line to serve these customers. Power requirements have climbed steadily. When Atikokan took over the system in 1957 the load was approximately 2,500 kilowatts. By December, 1958, it had increased to 3,268 kw. Illustrating its sound management policies is the fact that the Atikokan utility has instituted two rate reductions since it assumed operation of the system.

New Customer

In June last year, Atikokan signed a contract to supply power to Canadian Charleson Limited, whose

ore extraction plant north of town is expected to become one of the utility's biggest customers. The plant, which extracts ore from gravel deposits in the area, is expected to require at least 1,100 kilowatts when in full operation—one third of the township's entire present load.

In order to serve this new industry, the local utility built one mile of 44,000-volt line into the plant site to supply the company's 1,000-kva substation. In addition to its policy of encouraging new customers wherever possible, this municipal commission has approved a new street lighting program, and plans to eventually take over the physical operation of its system from Ontario Hydro. In line with this latter policy, two lots were recently purchased for a future warehouse and pole yard.

The progressive outlook of the Commission is indicative of the general optimism which is shared by almost every member of the community. Despite a recent decline in the United States market, which caused a temporary lull in business and industrial activity during the winter and spring a few months ago, the general air is one of confidence, even among the most recent newcomers.

Bob Clark, editor and co-owner of the community's award-winning weekly newspaper, *The Atikokan Progress*, probably can be considered representative of the many persons who flocked to Atikokan in the late 1940s and 1950s and settled down to become permanent residents.

Mr. Clark, who also operates a job

Continued on page 20)

printing plant, moved into the basement of a new building four years ago. As an illustration of his confidence in the community's future, when drawing up the plans he allowed for a building five stories high. Although he has felt the effects of the recession, Mr. Clark is convinced that the township has a future—and a good one.

Iron Ore Reserves

Estimates of Steep Rock's iron ore reserves would seem to bear out this optimistic outlook. Iron ore, as the chief raw material of iron and steel, represents the foundation of mechanized civilization—and the Steep Rock Range has lots of it. A consulting engineer reported reserves at 288,100,000 tons to a depth of 1,000 feet. This estimate also suggested that there was no reason why the ore bodies should not continue to considerably greater depths. One drill hole has shown ore more than 2,000 feet vertically below bedrock in the old lake bed.

Although indications of iron ore

were first found in the area of Steep Rock Lake as early as 1862, oddly enough it was reports of a gold strike which lured Thomas Rawn, the "Father of Atikokan," to the region.

Born near Tara, Ontario, Rawn and his wife built a hotel at Mine Centre, 40 miles west of the present site of Atikokan, in 1896. In these early days there were several gold mines operating in the district, one of which was the largest stamp mill mine in Canada at the time. All are now abandoned and only a few prospectors and gold panners have kept looking for the big mother lode which is believed to exist in the region.

Hearing reports that the CNR planned to establish a divisional point at Atikokan, Rawn sold his hotel, packed his wife and belongings into a canoe and paddled east. He completed his new Pioneer Hotel at Atikokan in 1900.

Reeve Sandy Johnston, born near Chatham, first came to Atikokan in

1925 and used to eat at Rawn's hotel. He recalls that someone usually walked a short distance into the woods and shot a moose when the cook ran low on food. "We ate a lot of moose in those days," he told *Ontario Hydro News* recently.

The rapid opening of the Mesabi iron range 75 miles south of Atikokan in the early 1900s resulted in many efforts to locate iron ore bodies in the vicinity of Steep Rock Lake, but no attempt was made to explore the bottom of the lake since it was from 70 to 300 feet deep.

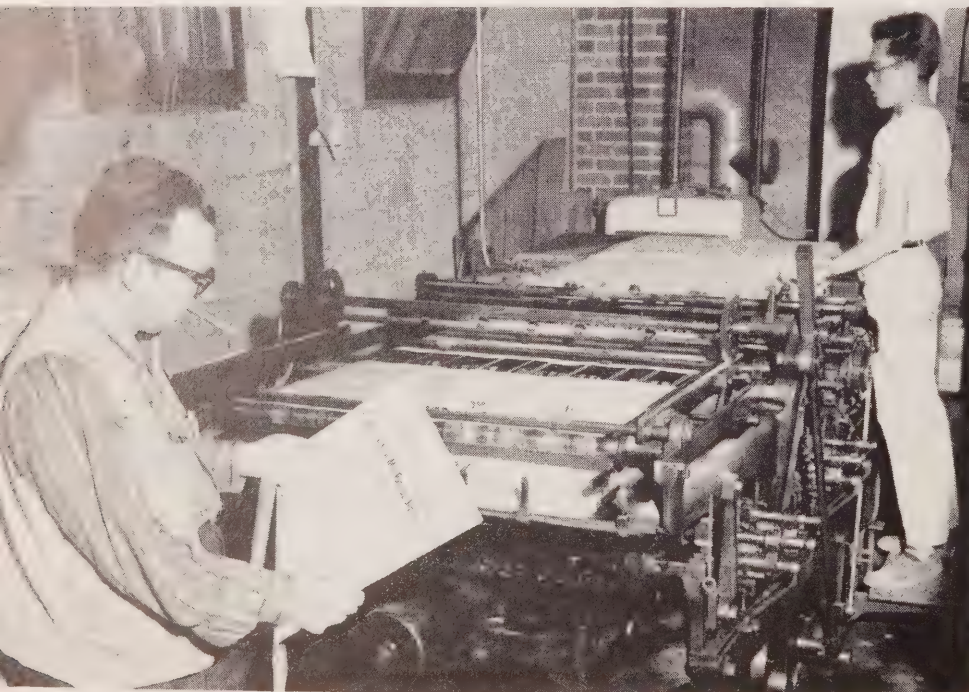
Accidental Discovery

In 1930, Julian G. Cross, a mining engineer and prospector from Port Arthur, was crossing the lake on the ice when he noticed that the dip needle he was carrying indicated the presence of iron ore. He became associated with the late Joseph Errington, the successful Canadian mining man, and in 1938 a drilling program finally located ore below the lake bed. The following year Steep Rock Iron Mines Limited was incorporated to develop the property, which covers more than 7,000 acres.

The development of the iron range justified the faith of early settlers like Rawn and others in the rich mineral potential of the region. Rawn himself continued prospecting until, at the age of 80, he vanished while staking claims east of town. His body was never found and it is generally believed he stumbled into an abandoned mine shaft.

Iron ore has brought a new way of life to Atikokan. Its history is relatively short, spanning a period of only some 60 years dating from the day Thomas Rawn and his wife started clearing an area in the virgin forest. The rugged country surrounding the community is a constant reminder of the heritage left by the prospectors and woodsmen, who carved a life for themselves in the wilderness, and started this remote section of the province on the road to future prosperity. ■

ANOTHER EDITION of the community's award-winning weekly newspaper, *The Atikokan Progress*, comes off the press under the watchful eye of Bob Clark, editor and co-founder.



HOW DID YOU GET YOUR NAME?



The original Joneses were John's sons.

UP into mediaeval times, most people were known by their Christian names alone. Surnames did not exist.

There came a time, however, when there were too many plain Johns, Alfreds, Rowlands and Roberts running around. Something had to be done to distinguish one from another in village records.

And so one John became known as John of the Hall, and finally John Hall, because he lived near the lord of the manor's hall or great house. Another became John of the Mead, and finally John Mead, because he lived at the mead or meadows; another John the Smith, and then John Smith because he was a smith by trade; another John Reed or Reid because he had red hair. Usually surnames became attached to a family gradually, over several generations.

Because William was a favorite name in mediaeval times, as it is today, Williamson and Wilson are now common. Originally they meant the son of William and the son of Will.

John was another popular name in old England. This explains why there are so many Joneses today. Jones is simply a shortening of John's son... Originally Hudson meant the son of Hud; Watson, the son of Wat... MacIntosh means son of the chief; MacIntyre, son of

Perhaps from an inn sign, or an old castle,

or the characteristics of ancestors who lived many centuries ago

the carpenter; MacNair, son of the heir.

If your name is Wood, your ancestors once lived near, at or in a forest; if it's Green, they lived at the village green; if Lee or Leigh, they lived at the lea or meadow.

Clifton, Manchester, Sutton, Bradford, Kirby, Middleton and many others were taken from names of towns or villages in old England. A man acquired one of these names only after he had moved away from the town. It was natural for people in Kirby, for example, to refer to the strange John who had just moved among them as John of Middleton, if he had previously lived there.

If your last name is Swan, Lion, Hart or Cross, it may mean that your ancestors owned, worked in or lived near an inn called The Swan, The Blue Lion, The White Hart or The Golden Cross.

Ball might also come from an old inn sign... or from the name Baldwin, long prominent among English nobility... or it may mean that one of your ancestors was quite bald.

Old Testament names were popular in the Middle Ages. Adams, Addamson, Addison and many others are derived from Adam... Davies, Davis, Davidson, and Dawson from David.

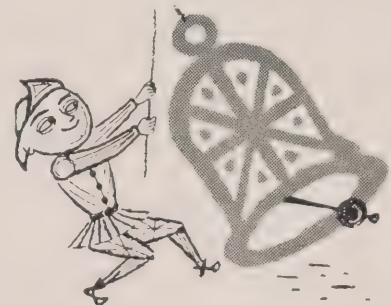
Is your name Coward? This often



Some cow-herds were named Coward.

derived from cow-herd. Armour? One of your ancestors probably made armor for mediaeval knights. Stringer? The first in your family to hold that name probably strung bows and arrows... Shepherd, Baker, Wright (the old name for carpenter), Cook and Miller are other common occupational names.

The names Brown and White come from ancestors who were dark-



Your name Bell? Perhaps this is why.

or light-skinned respectively... Knight may mean you are descended from the likes of Lancelot or Galahad... or your name may have come down from the Old English word, cniht, meaning servant.

Is your name Short or Long? These names originally described physical characteristics of your ancestors... Poker? It probably means your ancestors made bags. Poke meant bag in old England... Stewart, Steward or Stuart? These may signify that your ancestors occupied the powerful post of lord's steward back when knights were bold.

Bell may mean that one of your ancestors was a bell-ringer; or, like Ball, the name may have come from an old inn sign; or from "le bel," meaning the good-looking one... Cruikshank means crooked leg; Armstrong means just what it says.



Cupid's Day

BY JOAN McLEAN

IN AN age which recognizes "National Flashbulb Day" and "National Codfish Week," it is not surprising that there's a day for expressing personal sentiment.



Valentine's Day is not, however, a 20th Century innovation. Ancient Rome observed the Festival of Lupercalia on February 14. Young men drew by lot the names of girls, who became their partners during the celebrations. The early Christian authorities frowned on this "heathen levity," but rather than attempt to eradicate the custom immediately, they drastically revised it. Names of saints to be honored during the day were substituted for girls' names.

St. Valentine's connection with February 14 came about around the year A.D. 270. On the eve of the reformed Feast of Lupercalia, Valentine was beheaded for his refusal to renounce Christianity. His farewell message to the jailer's daughter was signed "From Your Valentine." Thus it's considered to be the forerunner of today's Valentine cards.

The belief that birds mated on February 14 also gained credence in the 14th and 15th Centuries. In his "Parliament of Fowls," Chaucer confirmed the merger of the two concepts with these words: "For this was St. Valentine's Day when every fowl cometh, there to choose her mate."

A natural offshoot of this theory was the romantic superstition that a young person would find his or her future mate in the first of the opposite sex encountered on Valentine's Day. This belief fostered a wide variety of subterfuges to ensure meeting the right person. In 1784 a young girl confessed in her diary that she lay "abed" all morning with her eyes closed until a certain Mr. Blossom came to the house "for I would not have seen another man for all the world."

A more famous diarist, Samuel Pepys, records that Valentine's Day in the 16th and 17th Centuries involved costly gifts. In 1667 Pepys stated that the Duke of York, having drawn Lady Arabella Stuart as his Valentine, gave her a ring worth £800.

In the mid-eighteenth century, hopeful young men and women designed beautiful cards to send to their particular "light o' love." They composed and inscribed their own verses on the card. The following sample indicates that love rather than metre must have been the main inspiration:

"On the outside sweet turtle dove,
I write the passions of my love,
No power of envy can pretend
To say that I false lines have penned."

To aid the once-a-year "poet," a book called "The Young Man's Valentine Writer" appeared in 1797. The verses within were arranged according to the sender's occupation—whether it be a lawyer, doctor, sailor, weaver or, as in the sample below, a brick-layer:

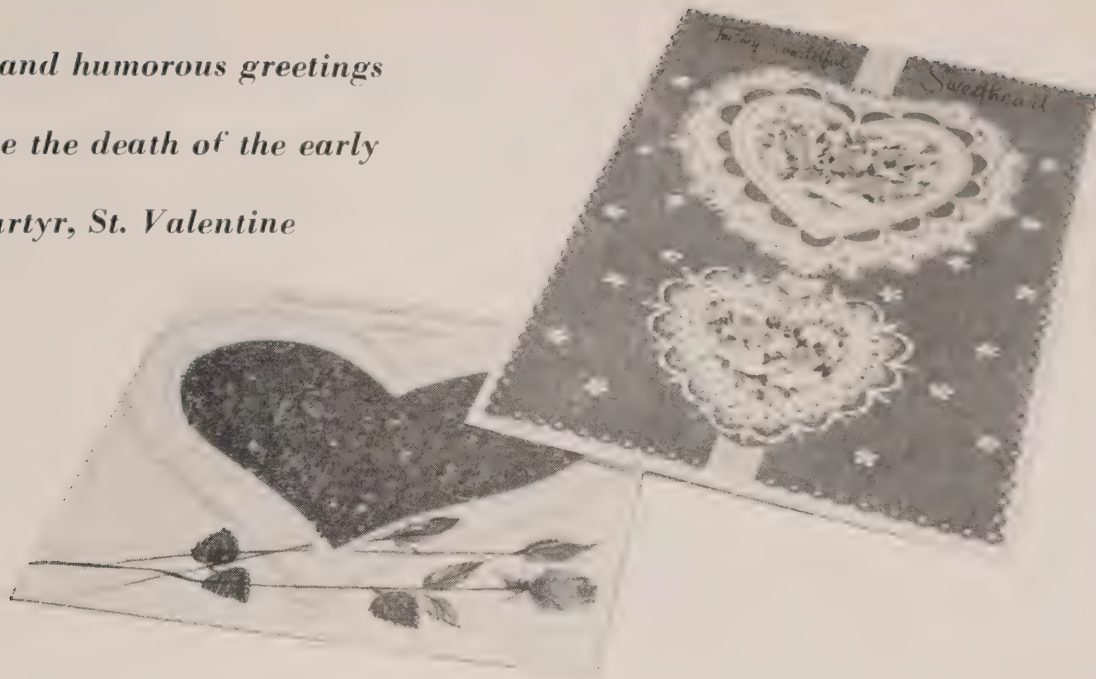


"With mortar and trowel
You know I do no ill,
But a mansion can raise very high.
Then, sweet Valentine,
If you will be mine
You shall have a fine house, by and by."

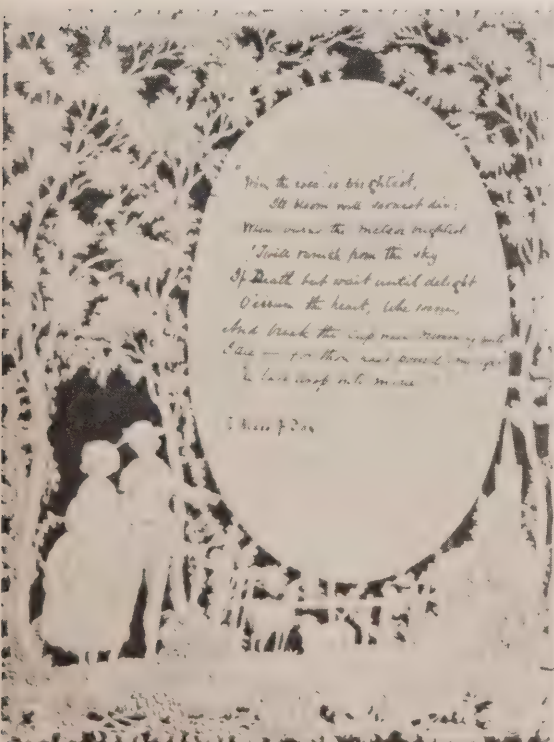
These verses were lettered, first of all, on hand-made Valentines. Some were made of hand-cut paper lace. Others were elaborately sketched and painted pieces, bearing either flowers, Cupid and his darts and quiver, musical instruments, hearts and doves, which have become symbolic of St. Valentine's Day.

Gradually, multi-colored lithographed cards, with stereotyped verses began to appear. In the 19th Cen-

*Sentimental and humorous greetings
commemorate the death of the early
Christian martyr, St. Valentine*



SWEETHEARTS aren't the only ones exchanging Valentine wishes. There are cards suitable for relatives of every category.



THIS 18TH CENTURY Valentine featured an embossed design with a hand-written greeting. It was one of 300 Valentines displayed at a 1929 exhibition in London's Victoria and Albert Museum and reproduced in The London Illustrated News.

tury these cards became more and more elaborate with yards of exquisite paper or real lace.

At the same time, Valentines of a completely different complexion became popular. Instead of expressing love and devotion, these "caricatures" lampooned school teachers, old maids, bachelors, the smug and the conceited in no uncertain terms. Usually the colors were lurid, the drawings crude and the verses venomous. Here's a sample:

"With bow and smirk, and hop and jerk,
The Lady-Killing elf,
Will find at least, when time has pass'd,
He's only killed himself."

Valentines took a practical turn in the 1930's by including packages of seeds. One, with the caption "For your Garden of Love," had a package of forget-me-not seeds attached. Onion seeds accompanied the sentiment: "I'm strong for you."

At the beginning of World War II, another type of greeting became the vogue. Rather than mail a Valentine card, some suitors sent a singing telegram. For 32 cents, the cost of a regular telegram, a paraphrased version of "My Darling Clementine" was intoned by the telegraph company employees.

Valentines became more universal in appeal in the middle 'forties. Not only sweethearts, but mothers, fathers, grandmothers and grandfathers, sisters, cousins and aunts—in fact, all relatives—were on the receiving end. Last year one card manufacturer carried 24 different types of Valentine cards for "Mother" alone.

(Continued on page 24)

OF COURSE the youngsters aren't particularly concerned with Valentine Day sentiments, but seasonal paper dolls and the ever-popular coloring books and other cut-outs have become popular novelties.



Although children have exchanged Valentines in the classroom for decades, manufacturers are now designing several lines of cards specifically for children. Many of these feature drawings to color or paint, as well as paper dolls and cut-outs.

The modern "hearts and flowers" brand of greeting can hit the sender's pocketbook below the belt. Some cost as much as five dollars, and one frothy creation of white satin and pink lace, with a tiny bottle of Chanel No. 5 nestling inside, sells for an all-time high of \$7.50.

The fashion pendulum in Valentines is swinging back to the "caricature" cards of 100 years ago. The current craze for satirical cards includes Valentines with such pithy comments as "If you think this card is pretty, you should see the one I sent my Valentine."

A currently popular type of "slam" card is printed on sheets of heavy paper in bright colors, with verses like this:

"You're the life of every party
With your gab and corny jokes.
You like to make yourself at home
Just butting in on folks;
You wanta know a secret, chum?
(Guess now's the time to spill it)
If a party has some life at all
You're just the one to kill it."

But in spite of the "slam" cards, St. Valentine's Day still spells romance for hundreds of young lovers. ■



TYPICAL of the modern slam or satirical type of greeting is this disparaging comment on the card-playing abilities of a friend or even a relative.



LET'S CHAT



With Lois Hurst of Anne Allan's Hydro Homemaker Service

WHEN you find yourself shivering these wintry days, remember that cold air in the right place can be a most valuable friend—in your refrigerator and freezer!

Ancient Romans sent runners to the mountains for snow to cool their foods. Even primitive man knew that cold prolonged freshness in perishables like meat. The first refrigerators were earthenware water-pots. The porous walls of the containers permitted small amounts of moisture to seep through to the outside and evaporate. In so doing, heat was drawn from the water, keeping it chilled. Thus the phenomenon of cooling by evaporation was evolved.

However, it was not until 50 years ago that mechanical cooling based on this principle was developed. Queen Victoria could not enjoy the exotic delicacies her world-wide Empire colonies offered because ships in her day lacked refrigeration equipment. Today an endless variety of food comes to our tables from every corner of the world, thanks to dependable electric refrigerators.

Household refrigerators in 1959 offer convenience and storage facilities beyond Victorian imagination. Colorful and streamlined, they give an air of distinction to the kitchen.

Frost never forms in the new models. A small fan inside circulates the air, draws it back past a cooling coil, which causes any moisture to condense. The water is drawn off and the air is left cool and dry. Packages in the freezer never frost

up, and ice cubes do not stick together.

Ice cubes are made automatically. The trays fill themselves with water. Then the frozen cubes are tipped into a storage pan below. A hundred cubes a day can be produced and stored, surely enough for the hottest weather.

Electric refrigeration in the next ten years will undergo further amazing changes. By means of a phenomenon known as the "Peltier Effect," cold will be produced when an electric current is passed through the junction of two dissimilar metals. Electronic refrigeration will eliminate conventional motors and compressors, rendering the new types soundless.

Refrigerated drawers and cupboards will be located wherever convenient in the kitchen. This will eliminate storing food in one large cabinet. The temperature of each unit will be adjusted to its specific cooling requirement. The bathroom wall cabinet will keep medical supplies cool, while even a baby's bottle will remain safely chilled in its own little electronic flask kept in the nursery.

Besides preserving food, another effect of cold has been observed—the "Winter Appetite Effect!" Youngsters coming in from skating, skiing and sleighing can consume unbelievable quantities. Here is a chance for teen-agers to do-it-themselves if you provide electrical appliances and the proper ingredients. Orange Nut Waffled Toast is a tangy, nutritious meal in itself, and any young-

ster can make it in a waffle baker.

Orange Nut Waffled Toast

- 2 eggs beaten
- 3 tablespoons icing sugar
- 2/3 cup orange juice, fresh, canned or frozen
- 2 teaspoons grated orange rind
- 8 slices white bread.

Combine the beaten eggs, sugar, orange juice and rind in a shallow bowl. Dip each bread slice in the egg and orange mixture, turning to coat both sides. Place in a preheated waffle baker.

Before closing the lid, sprinkle with some of the following mixture:

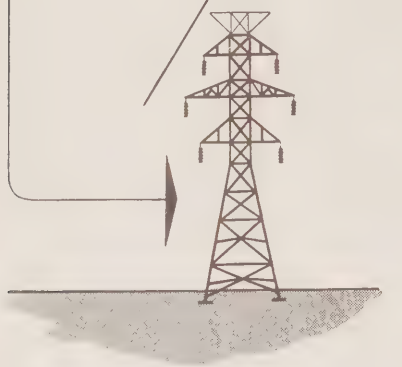
- 1/2 teaspoon cinnamon
- 1 1/2 tablespoons granulated sugar
- 1/2 cup chopped nuts.

Then close the lid of the waffle baker and brown. Serve with maple syrup, liquid honey or marmalade. This makes 4 servings with 2 slices of toast each.



Just for fun on Valentine's Day, cut the bread slices with a heart-shaped cookie cutter before dipping. They'll make pretty as well as hearty eating. ■

ALONG HYDRO LINES



Tillsonburg Sets New Hydro Rates

Tillsonburg P.U.C. has announced adoption of a new rate structure, effective January 1, 1959, which will mean a reduction in total revenue of approximately 12 per cent.

The reduction has been possible despite utility expenditures, which include financing of the municipality's share of the cost of frequency standardization, purchase of several new utility vehicles and an emergency transformer trailer unit, which can be moved to any point in the distribution system to supply emergency power.

Cobourg Reduces Water Heater Rates

A reduction in electric water heater rates will result in significant savings to Cobourg's flat rate water heater customers. Under the new rate schedule, a 600-watt heater will cost \$2.21 per month instead of \$2.38, the 750-watt heater \$2.62 instead of \$2.97 and the 1000-watt heater \$3.28 instead of \$3.96.



CONTEST WINNER

CHRISTMAS decorations at the Port Credit home of George McCloy, pictured above, provided a neat dividend for the owner. He won first prize of \$25 in a contest for the best electrically-decorated home, sponsored by Port Credit P.U.C. A second prize of \$15 and three third prizes of \$7.50 each were also awarded, as well as a \$25 prize for the best decorated place of business. Over 500 of the 1400 homes in Port Credit were decorated this year. Official judges for the contest were Commissioners A. F. Warner and E. C. Drew and Rory O'Donal of the *Port Credit Weekly*. Although this is the first contest of its kind at Port Credit, W. H. Munden, Secretary-Treasurer of the local commission, is confident that a tradition has been established.

APPROVE TORONTO REGION HEADQUARTERS

A MODERN, two-story building will be erected in Willowdale as the new headquarters for Ontario Hydro's Toronto Region. Site of the new structure is Commission-owned land on Yonge Street, two blocks north of Finch Avenue. Work is expected to start early this summer, and the office is scheduled for completion in mid-1960.

The new building is designed to provide more adequate accommodation for the Toronto Region staff of about 120. Space limitations in the present office, on Bloor Street opposite Varsity Stadium, have necessitated rental of additional temporary accommodation.

The new location will mean easier accessibility for municipalities and rural areas served by the Region. Plans for the new office also include parking space for 125 vehicles, representing a considerable improvement over the facilities available at the present site.

The building will combine smartness with utilitarian features aimed at efficiency of operation. The L-shaped structure will incorporate a gross area of 42,000 square feet in two floors and a basement. The foundations will be concrete, the frame will be structural steel and the walls will be masonry.

ONTARIO HYDRO NEWS

New Substation

Whitby P.U.C. officials recently inaugurated a new substation as part of an overall plan to increase the capacity of the local system. Participating in the ceremony were Chairman Albert Randall, Manager Harry Simpson and Foreman David McKeag.

Port Arthur Institutes Water Heater Rentals

Home-owners in Port Arthur can now rent their electric hot water tanks from the local utility. Port Arthur P.U.C. has announced that it will install, service and repair the heaters for a flat monthly fee, including energy used.

The 40-gallon tank, with a 600-watt heater, will be offered to utility customers at a net monthly charge of \$3.87, while the 40-gallon tank, with a 1000-watt heater, which will meet the water heating requirements of most customers, will cost \$4.72 per month. A 50-gallon tank, with a 1,500-watt heater, will also be available at \$6.48 per month. The fast-recovery types of water heaters, with 3000- or 4,500-watt upper elements, will be metered.

Chairman-Superintendent Retires at Thornbury

Simultaneously Chairman and Superintendent of Thornbury P.U.C. for seven years, Mathew Dillon retired recently at the age of 80. He had been Chairman for 25 years.

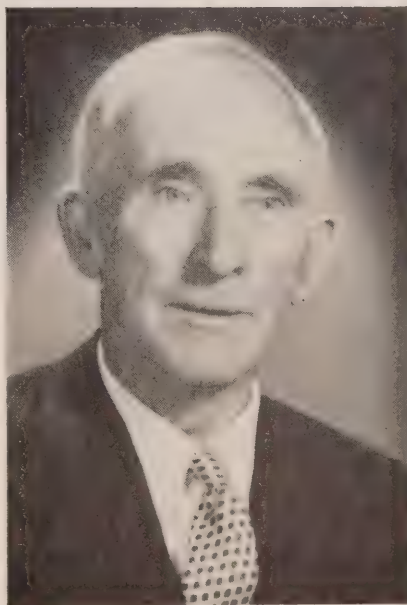
Born at Rocklyn, Ont., Mr. Dillon worked in Ohio for nine years and in the contracting business in Thornbury area before joining the Beaver Valley Telephone Company as Superintendent in 1918. He retired from that position seven years ago and became Superintendent of Thornbury P.U.C.

During his long association with Thornbury, Mr. Dillon has taken an active part in community life, including fraternal organizations, and served on the town council and as Reeve of Thornbury for two years.



FIRST IN NORTHWESTERN ONTARIO

FIRST of its type built in northwestern Ontario, the new Geraldton R.O.A. office, shown above, was officially opened recently. In the lower photograph, D. I. Nattress, Manager of Ontario Hydro's Northwestern Region (left) cuts the traditional ribbon as Area Manager Arthur Chadwell looks on.



MATHEW DILLON

He is married and has four children. One son, C. Earl Dillon, is Ontario Hydro's Area Manager at North Bay.

Preston Installs Radio Equipment

Preston P.U.C. recently approved the purchase of two-way radio equipment for utility trucks.

The new system will cost approximately \$5,000 and will include radio units for three Hydro trucks and two waterworks vehicles. Radio communication will be co-ordinated by a central unit at the local substation and by a remote control station at the Preston pumping plant.

Utility Official Retires

George Storey, who has supervised both the electrical and waterworks departments as Secretary of Stouffville P.U.C., retired recently after six years' service. Previously he was clerk-treasurer of the municipality for a period of 12 years. Elmer R. Daniels has been named to succeed Mr. Storey until a permanent appointment is made.

SIR CLAUDE GIBB

ONE of Britain's leading physicists and industrialists, Sir Claude Dixon Gibb, K.B.E., died suddenly at a Newark, N.J., air terminal on January 15, shortly before his departure for Toronto.

Chairman and Managing Director of C. A. Parsons and Co. Ltd., Newcastle upon Tyne, England, one of the largest steam turbine manufacturing firms in the British Commonwealth, Sir Claude was well and favorably known in Ontario Hydro engineering circles. As the chief executive of the firm which handled the fabrication and installation of the initial turbo-generators at the Commission's Richard L. Hearn Generating Station in Toronto, the deceased made many trips to Toronto for consultation with Hydro management and engineering representatives. He was travelling to Toronto for engineering conferences at the Commission's Head Office in connection with the installation of additional turbine equipment at the Hearn station when his death occurred.



SIR CLAUDE GIBB during one of his many visits to Hydro's Hearn Station.

Born in Adelaide, South Australia, Sir Claude graduated from the University of Adelaide, and subsequently served during World War I as a pilot in the Australian Flying

A. W. F. McQUEEN HEADS ENGINEERS

THE 18,000-member Association of Professional Engineers of Ontario has announced election of Andrew W. F. McQueen, P. Eng., of Niagara Falls, Ont., as its 1959 president. He succeeds C. T. Carson, P. Eng., as head of the largest professional organization of its kind in Canada. The A.P.E.O. is the licensing body for the engineering profession in Ontario.

In business life, Mr. McQueen is President of H. G. Acres & Co. Ltd., Canada's largest firm of consulting engineers. At present the firm is undertaking two large hydroelectric projects in West Pakistan. A member of the A.P.E.O. since 1938, he has served on the Executive Council during the last two years, and last year was the Association's 1st Vice-President.

Corps. In 1924 he became associated with the C. A. Parsons firm where his outstanding scientific abilities won him progressive advancement to the company's foremost position in 1945. During World War II he made a distinguished contribution to Britain's war effort in several leading and responsible capacities, particularly in the field of mechanized equipment production. In recognition of his accomplishments a knighthood was conferred on him in 1945.

Expressing regret on behalf of the Commission, Chairman James S. Duncan paid an eloquent tribute to Sir Claude:

"The United Kingdom, and indeed the British Commonwealth, has lost one of its most distinguished citizens whose contribution to Britain during the years of conflict and in those of her postwar recovery has been of the highest order.

"Sir Claude combined, to a very rare degree, the gifts of an outstanding engineer with exceptional qualifications as an industrial executive. I was always impressed with

He is a graduate (1923) in civil engineering from the University of Toronto, and received the professional degree C.E. from his alma mater in 1932.

Elected 1st Vice-President for 1959 is Dwight S. Simmons, General Manager of Manufacturing, Imperial Oil Ltd., Toronto. The 2nd Vice-President is John W. Holmes, design engineer, Canadian General Electric Co. Ltd., Peterborough.

Robert L. Hicks, Toronto Hydro-Electric System, and Gordon M. McHenry, Ontario Hydro, were elected as councillors for the electrical branch of the A.P.E.O., while Dr. J. Herbert Smith, Toronto, President of Canadian General Electric Co. Ltd., was appointed to this branch by the Lieutenant-Governor in Council.

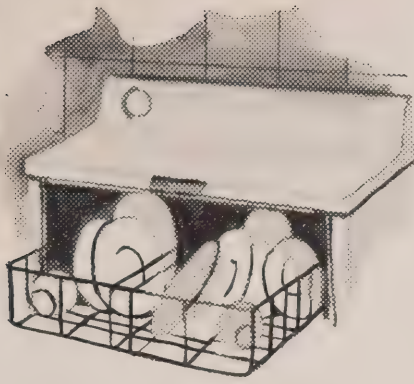
his wide range of knowledge on a variety of subjects. He played a leading part in the industrial application of atomic energy, and also made a great contribution in the fields of education and of youth training. He was possessed of inexhaustible energy, and his ability to get things done rapidly, efficiently and according to record-breaking schedules was one of his outstanding characteristics.

"Ontario Hydro has lost not only a valued friend, but one whose advice we often sought and always found worthwhile."

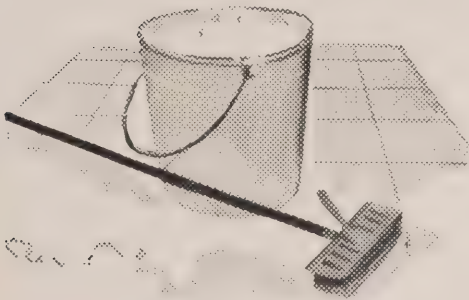
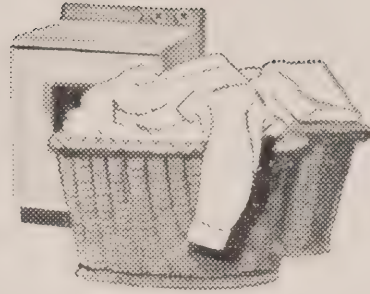
Amherstburg Reduces Water Heater Charges

Amherstburg P.U.C. has announced an adjustment of electric flat rate water heater rates that will result in a reduced cost of water heater service to the utility's customers averaging 29 per cent.

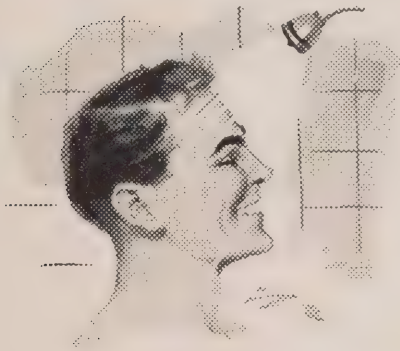
In 1958 rates were reduced to domestic commercial and power customers to effect a decrease in overall revenue of 8.5 per cent.



You get
loads...



and
loads...



and loads
of hot water



with an

ELECTRIC WATER HEATER

And an electric water heater is so efficient, it costs only a few cents a day to operate. With a modern electric water heater of the proper size and heating capacity you can depend on plenty of hot water for *all* your household needs. An electric water heater is safe, clean and economical. It's the modern choice of families who "live better electrically."



MARCH

1959

ONTARIO AND HYDRO DIVISION

3D



ONTARIO HYDRO NEWS



1959

MARCH



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MARCH, 1959

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BUILDING PUBLIC CONFIDENCE

IN OBSERVING National Electrical Week last month, Canadians and citizens of the United States paid an international tribute to the memory of that prolific inventor, the late Thomas Alva Edison, who produced the amazing total of 1,300 patented inventions before he died in 1931.

While there were many who also helped to lay the foundations for our present-day electrical industry—men like George Westinghouse, Alexander Graham Bell, Lord Kelvin and many others—Edison is universally credited with taking electricity out of the laboratory and devising the first techniques for making it the servant of mankind.

Notable among his achievements was the development of the first practical incandescent light for mass production and his pioneering efforts in the field of power generation and transmission. It is significant that Edison installed one of North America's first generators at a Cornwall, Ont., textile plant.

Neither he nor those earlier electrical pioneers—several of whom did work in Canada—could possibly have visualized that they were unleashing a motive force that was to exert such a potent and all-pervasive influence on the economic destiny of this nation and the entire Canadian mode of living. Before the turn of the present century, the suggestion of harnessing Niagara Falls to generate electricity was greeted with public ridicule. Little did those early skeptics realize that Canada would eventually install more hydro-electric capacity than any other country in the world, except United States, which has 10 times the population. Nor did they foresee that Canada would, one day, rank among the world's major users of electric power—second only to the Norwegians in per capita consumption.

There are many facts which justify the selection of the theme, "Electricity Builds Jobs," for this year's observance of National Electrical Week. In the last year for which final figures are complete—1957—Canada's electrical manufacturing industry had 81,200 employees with a payroll in excess of \$321 million. Exclusive of construction workers, the electrical utilities of Canada, in 1957, employed more than 37,000 persons whose wages amounted to almost \$154 million. Add to these, the electrical contractors, wholesalers,

(Continued on page 33)



King Winter, in one of his capricious moods, can create some fanciful and scenic effects. On a trip to northern Ontario, a Commission photographer recorded this "cool" impression of the tailrace at Ontario Hydro's Alexander Generating Station on the Nipigon River.



PUTTING

*Television has had a revolution
-- and for electrical utilities*

REMEMBER the lake-swimming craze of a few years ago when the pastime of attempting to conquer Lake Ontario was almost as popular as the more recent hula-hoop craze? Interest in self-propelled navigation across the lake has since declined to the vanishing point, but many people at the Canadian Broadcasting Corporation headquarters in Toronto still retain vivid recollections of that frenzied period.

During the summer months of those years (circa 1954-55-56), when challengers by the dozen were plunging into the cold waters of Lake Ontario and stroking their way toward Toronto in quest of fame and glory, CBC camera crews frequently rushed to remote points along the Toronto waterfront at all times of the day and night when it appeared a particular swimmer might succeed.

Few TV viewers probably think about it, but setting up a remote telecast in jig-time is a major technical operation. One of the most important requirements is an adequate source of power. Cameramen and lighting technicians can't solve this problem by plugging their equipment into the nearest electrical out-

CBC TELEVISION TOWER in Toronto, which soars some 500 feet in the air, is a prominent landmark.

ONTARIO HYDRO NEWS

BY PETER MAITLAND

POWER IN THE PICTURE

*on the living habits of the average Canadian
t another jump in power consumption*

let (even if there should happen to be one).

Tom Nutt, CBC supervisor of technical lighting operations, recalls that one of the first moves in planning coverage of a lake swim in those days was a hurry-up call to Ontario Hydro's A. W. Manby Service Centre at Islington for some portable generating equipment to power the TV cameras and other broadcasting facilities.

"It was during this period that Ontario Hydro provided its greatest emergency service to the CBC by making available these rental motor generators," Mr. Nutt says.

Provided Generating Units

"Whenever it appeared a swimmer would succeed, we attempted to provide television coverage of the finish. Invariably these apparent successes seemed to take place at night, and on many occasions Ontario Hydro rushed large and small generating units to various locations on the waterfront to help us out."

Cliff Lumsden's winning of the Canadian National Exhibition Marathon along the lakefront breakwater in 1956 is one major instance of the co-operation between the CBC and Ontario Hydro to bring an on-the-spot report to TV viewers.

The marathon finished at night and an extensive lighting set-up was

(Continued on page 4)



CBC CAMERAS recorded an important event in Canadian history in October, 1957. Queen Elizabeth, accompanied by Prince Philip, opened Canada's Parliament, the first time a ruling British sovereign had personally officiated at this ceremony.



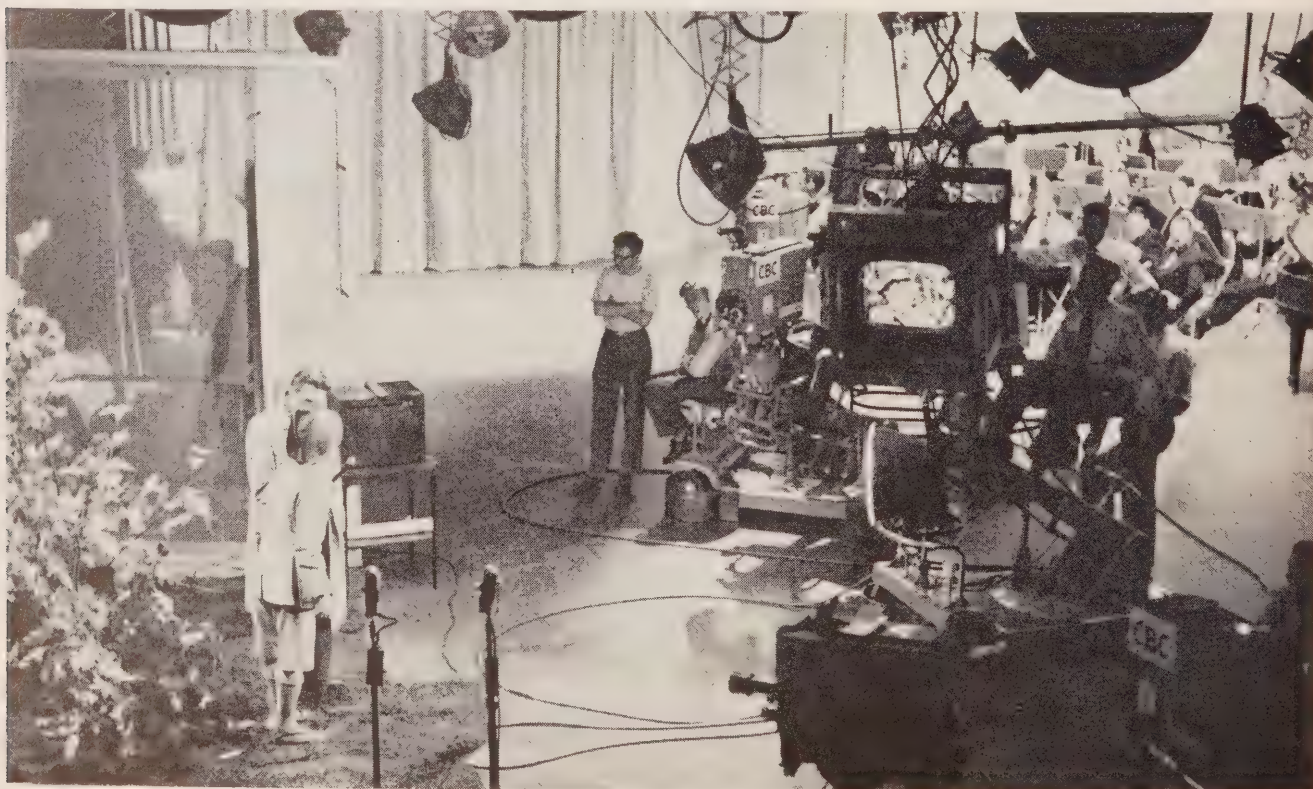
THIS Royal Canadian Navy vessel was transformed into a floating television studio for CBC coverage of a Lake Ontario marathon swim. Electricity was supplied by portable generators.

necessary for the TV cameras. For large-scale coverage of such events, the lighting equipment consists of large fresnel spotlights of two, five and 10 kilowatts. Mr. Nutt recalls that Ontario Hydro supplied portable generating equipment for this particular telecast. CBC crews started work about 6 p.m. and two hours later they were on the air with all facilities.

"Hydro has always come through with equipment on the spur of the moment for emergency coverage," says Mr. Nutt. "The Hydro crews have worked day and night with CBC technicians preparing for remote telecasts."

The provision of special service to the CBC, Mr. Nutt points out, has not been limited to Ontario Hydro. Special TV coverage of such events as the opening of Parliament, political conventions, Royal visits and the

LIGHTS, CAMERAS and other types of electronic equipment in the CBC studios in Toronto involve heavy electrical installations. For lighting purposes alone, the newest Toronto studio — the largest in Canada — uses sufficient power to serve a 32-unit apartment building.



Stratford Shakespearean Festival has been made possible by the provision of extra transformers and cables by municipal electrical utilities.

Power Customers

Ontario Hydro, of course, becomes involved in the direct supply of equipment only in emergencies when portable generating units are needed in a hurry. For daily broadcasting and routine outside programs, Ontario's 16 TV stations, stretching from Port Arthur to Ottawa, are served by the municipal electrical systems.

The operation of lights, cameras and the diverse pieces of electronic equipment found in a TV studio requires large amounts of electricity.

The CBC's new studio in Toronto is a good example. The largest in Canada, its lighting system uses enough power to service a 32-unit

apartment house. Lighting equipment, with a total demand of 320 kw. is available for full-scale television broadcasts.

The 17 miles of cable used in the lighting system of this studio is enough to wire 57 homes.

Mr. Nutt, who worked in Ontario Hydro's communications section for several years prior to joining the CBC in 1951, explains that TV cameras do not need a high level of illumination to record a picture. The large power requirements are a result of the need for additional lighting to secure dimensional and dramatic effects. TV stations will become even better customers for electricity in the future. When color television comes to Canada, the lighting requirements of a TV studio will be at least tripled.

But the operation of TV stations represents only part of the impact

of this new industry on Ontario Hydro and the associated municipal electrical utilities.

In September, 1953, one year after the first Canadian TV station went on the air, the Dominion Bureau of Statistics estimated there were 272,000 television sets in use in Ontario. By December, 1958, there were an estimated 1,290,000 sets in Ontario homes. In terms of electrical consumption, the load represented by these sets is estimated at 232,000 kilowatts, a figure equivalent to the combined peak loads of Ottawa, St. Catharines and Sudbury in December, 1958.

Today the average Canadian is spending more time at home watching his television set with his family. This change in living habits has, in turn, meant increased use of the many electrical appliances found in the modern Ontario home. ■



TELEVISION has changed the living habits of many Canadians. By December, 1958 1,290,000 sets were in operation in Ontario, representing a load of 232,000 kw.





RESPLENDENT in his new headdress, Hydro's Cannington Area Manager Claire Morgan (left) and Georgina Island's Chief John Charles watch as Mrs. Charles adjusts the beads on Mrs. Morgan's costume, signifying her title, Wa Wa Sko Nans or Princess Little Flower.



Georgina Turns on the P



CLAIRE MORGAN, Manager of Ontario Hydro's Cannington Area, has a new name. He's now Chief Wah Sum Win (Lighting).

His new title is proof positive that the residents of Lake Simcoe's Georgina Island Reservation, 50 miles north of Toronto, enjoy the opportunity to "Live Better Electrically."

Last summer, Hydro's Cannington Area staff began the job of bringing power to the people of Georgina Island. Some two miles of submarine cable were laid to span the strait between mainland and island; then two and one-half miles

THESE ADMIRING PATS from Chief Charles and several junior Georgina braves and maidens were hardly necessary as the pleased expression of Chief Lightning Claire Morgan provides convincing evidence that his feathers were by no means ruffled.

of distribution lines were erected on the island itself.

At 4.30 p.m. on January 16 this year, power was turned on for the first time, and this historic island, home of an Ojibway band for almost 100 years, formed another link with the outside world.

A gala testimonial dinner on February 1 in Georgina's Council Hall expressed grateful appreciation to the "white brothers." Attended by most of the island's 175 residents, and some 50 guests who crossed the ice, the celebration was climaxed by Chief John Charles when he placed a handsome feathered headdress on the Cannington Area Manager and formally conferred the new Ojibway title on him. Mrs. Morgan received a beaded costume of soft brown doe-skin and the title of Wa Wa Sko Nans—Princess Little Flower.

Then followed a series of congratulatory addresses by the new Chieftain; by Jack Beaver, Line Maintenance Superintendent of Hydro's Georgian Bay Region, himself a full-blooded Ojibway; A. A. MacKenzie, M.P.P. North York, who extended greetings on behalf of Ontario's Prime Minister, Leslie M. Frost, and by A. J. Featherstone, Superintendent of the Simcoe Indian Agency. During his brief remarks, John F. Winchester, Distribution Engineer, described the underwater line as the largest submarine cable ever laid in the Georgian Bay Region.

The youngest after-dinner speaker was seven-year old Natalie McCue, who thanked the Hydro visitors on behalf of the youngsters.

Today, electric lamps light the homes and other buildings across the island. And so January 16, 1959, is a date that the Ojibway people of the Georgina reservation will remember for some time to come. That was the day when, as one member of the band put it in the classic Ojibway tongue, "Wah Sko Na-Sa,"—the light came on. ■



GIBSON'S "SCRIBE" WINS AWARD

PHILIP (The Scribe) LaForce, 69-year-old journalist, weather prophet and homespun philosopher, of Gibson Indian Reserve near Bala, was a featured guest at this year's annual convention of the Ontario Weekly Newspapers Association.

Mr. LaForce, won Ontario Hydro's merit award for his news and views in the *Bracebridge Herald-Gazette* about Gibson Indian Reserve's residents and wildlife.

A plaque, presented by Hydro's Director of Information, James A. Blay, at the recent annual convention in Toronto, cited his "quality and accuracy of work and informative portrayal of life and activity in the rural areas of the province."

"I never thought of anything like this," said the ruddy little man of Iroquois and French-Canadian descent. "I didn't mean to be a writer—it's just a hobby."

"I didn't have enough education when I took over the column from my brother after he died eight years ago, because I started working as soon as I finished public school. So all I do is put down what I see and hear and ideas that come to me."

His weather forecasts are based on observations of things like the size of beaver huts and flight patterns of wild birds. Mr. LaForce's confident prediction: "It's been a pretty cold winter but we'll have a nice, early spring."

In the accompanying photograph, Mr. Blay (right) presents the Hydro award to Mr. LaForce while Robert J. Boyer (M.P.P.-Muskoka), Editor and Publisher of the *Bracebridge Herald-Gazette* looks on.



EVENTFUL YEAR

Canadian Red Cross marks 50th anniversary

THIS is an eventful year for the Canadian Red Cross Society. In 1959 the Canadian Red Cross commemorates 50 years of service to Canada, and the world will observe the 100th anniversary of the birth of the Red Cross idea.

The origin of the Red Cross may be traced directly to Henri Dunant, a Swiss banker. In 1859 he conceived the idea of a vast international organization, which took as its symbol the reverse colors of the Swiss flag.

When the Canadian Red Cross Society was granted its charter by an Act of Parliament in 1909 the nation was young and the work of the Red Cross was very limited. Prior to that time, Red Cross activities were handled by a small group of men and women, the first overseas Branch of the British Red Cross Society. This branch had been established by Major General G. S. Ryerson in 1896. His interest in the Red Cross dated back to 1885 when he fashioned a crude flag depicting the traditional symbol to mark a primitive ambulance during the Northwest Rebellion.

For 50 years the Canadian Red Cross Society has carried on the traditional principles established by Henri Dunant a century ago. Down

through five decades, the Canadian Society has grown from a very small establishment of a few willing and interested workers to the status it now enjoys—the nation's largest voluntary organization, comprising some two million Canadians.

Branches are active in every province. In 1957, Red Cross work was carried out in 1,221 communities as far north as Yellow-Knife, Northwest Territories, and it's estimated that volunteer members cover 200,000 miles a year in the pursuit of their many community projects.

To tell the story of the work accomplished and the people helped by the Red Cross down through the years would be a lengthy and involved chore. There would be highlights of Red Cross action in peace and war, in prosperity and depression. It would tell of the expansion of services and programs to meet the demands of a nation during its most exciting years. It would tell of the pioneering in public health work and the effort to make this country healthier and happier.

Help For Veterans

The story would outline services for our Armed Forces in two World Wars and in the Far East. It would recall the help provided, day in and

day out, for the veterans of those wars, who have been forced to live out their lives in the restricted confines of hospitals and institutions.

The people of all ages whose lives have been saved by the free blood transfusion service would contribute an exciting chapter. More than 250,000 Canadians will receive free blood transfusions through the Canadian Red Cross in 1959. The history would recall disasters and the Red Cross help that was given when headlines told of Haileybury, Winnipeg, Fraser River, Noronic, Hurricane Hazel, and Beauceville. Last year when the Springhill, Nova Scotia, mine disaster occurred, local Red Cross workers were on the job in 30 minutes.

Thousands of Canadian servicemen would willingly contribute many thousands of words on the meaning of a Canadian Red Cross prisoner-of-war parcel.

From beyond our shores, hundreds of thousands of men, women and children of many colors and many creeds would recall Canadian Red Cross help when the tides of fortune were against them. Last year the Canadian Society sent relief supplies valued at \$400,000 to 30 overseas countries. Others would thank a little-known service of our



RED CROSS VOLUNTEERS TAKE TO BOATS, CARS AND TRUCKS TO BRING AID TO DISASTER VICTIMS

Red Cross because it brought them together with loved ones after years of separation. Through the Canadian organization's intervention, more than 500 men, women and children from seven nations have been reunited with their families in Canada.

Millions of citizens would look back and reminisce about their days as members of the Canadian Junior Red Cross and of how that experience had given them a better appreciation of mankind and made them better citizens. The junior society, with a present enrolment of almost 1,275,000 members, has an equally impressive record of service too. In 1958 it sent relief supplies to assist youth in 26 countries. This year the Canadian Red Cross Society looks back over a half century of achievement and looks forward to its humanitarian obligations in the future. People have been and will always be anxious to serve as volunteers to carry on the traditional work but they must have the financial backing of their fellow citizens. ■

CANADIANS of all ages learn the rules of water safety through the Canadian Red Cross Water Safety Service. Over 170,000 persons participated in this important program in 1958.





ONTARIO'S LABOR MINISTER, Hon. Charles Daley, causes merriment remarking that labor-management representatives, in conciliation meetings, are "good fellows, mostly."



THESE STONEY CREEK DELEGATES (from left): C. J. Halliday, R. W. Huston, Mayor J. W. Watson and F. O. Leeson discuss a resolution to be presented to the Ontario Government. Delegates endorsed the motion during the meeting.

IMPRESSIVE IMPACT

Electric heating installations will have important effect on utility consumption figures, Hydro's First Vice-Chairman tells O.M.E.A. District 5 audience

INSSTALLATION of electric heating in homes and other buildings will have an impressive impact on the load diversity and consumption figures of Ontario's municipal electrical utilities.

This was the confident prediction of W. Ross Strike, Q.C., Ontario Hydro's First Vice-Chairman, when he addressed delegates at the recent annual meeting of O.M.E.A. District 5 at Merritton.

Records indicate that average energy consumption more than doubles in areas where electric heating is promoted, Mr. Strike stated. In sections of the Tennessee Valley and Oregon where electric heating has been promoted for several years, annual residential consumption

averages some 10,000 kilowatt-hours compared with Ontario Hydro's average municipal domestic figure of some 5,300 kw-hrs.

Mr. Strike warned, on the other hand, that utilities must guard against hasty or excessive promotion of electric heating, which might lead to improper installations and create customer dissatisfaction.

Discuss Promotion Campaigns

Supplementing Mr. Strike's remarks, W. Roy Harmer, Ontario Hydro's Manager of Sales Promotion, and his assistants, Robert Jackson and Ivan S. Widdifield, explained the current promotion campaigns relating to electric water heaters and other heating installations.

Keen delegate interest greeted President Bert Merson's announcement that O.M.E.A. executive members would meet with Ontario Prime Minister Leslie M. Frost to discuss the implications of proposed legislation to create a provincial Department of Energy.

Mr. Merson placed before the delegates a resolution petitioning the Ontario Government "not to enact legislation, which would circumvent the present independence of action of The Hydro-Electric Power Commission." Delegates gave unanimous assent to the resolution.

Conciliation Proceedings

Another featured speaker was Hon. Charles Daley, Ontario's Minister of Labor, who discussed labor relations and conciliation proceedings. Commenting on the question of prolonged contract negotiations, Mr. Daley asserted that business was carried out as usual while conciliation proceedings were in progress. With the retroactive clause in most union-management contracts, no one suffers. This is not the case when workers go out on strike.

In labor negotiations, he continued, both parties have an obligation — the union to obtain better



EXCHANGING VIEWS on electric water heater promotion were N. A. Grandfield, Brantford (left), and E. A. Washburn, Burlington.

working conditions for its members, and management to obtain the best output of work for the lowest possible cost. In spite of the apparent difficulties in reconciling these opposite views, experience had shown that the vast majority of negotiators enter into bargaining in good faith. To support this claim, Mr. Daley said, of 1,150 applications dealt with by his department last year, less than 200 went beyond the conciliation stage.

Held in Merritton's modern Community Centre, the meeting attracted an enthusiastic registration of more than 100 representing municipal electrical utilities in the Niagara-Hamilton-St. Catharines area.

Reflecting satisfaction with their stewardship last year, delegates re-elected the 1958 executive. They are: President—C. R. Buss, Thorold; First Vice-President—F. R. Kaupp, Merritton; Second Vice-President—Roy Pierson, Brantford Township; Directors—Mayor Harold Schneider, Port Dover; Cecil Swayze, Welland; K. C. Berney, Brantford, and Thomas Barnes, Niagara Falls. H. A. Howard, Thorold, was re-appointed Secretary-Treasurer. —by R. J. McDonell.



ELECTRICAL INDUSTRY HONORS

HYDRO'S CHIEF ENGINEER

DR OTTO Holden, whose 45-year engineering career with Ontario Hydro has involved every major hydro-electric project initiated by the Commission, was honored as "Electrical Man of the Year" at the February 11th luncheon of the Electric Club of Toronto.

Hydro's Chief Engineer was chosen for the distinction by the editors and readers of two trade publications, *Electrical News & Engineering* and *Electrical Contracting & Maintenance*.

Their publisher, E. Victor Manser, (right in the accompanying photo) presented him with an illuminated certificate saluting his outstanding accomplishments in hydraulic engineering.

Dr. Holden's contributions in his field were compared with Thomas Edison's by Hydro Chairman James S. Duncan, who addressed the Electric Club after the presentation.

"As an engineer," said Mr. Duncan, "Dr. Holden is well deserving of this recognition, especially this year when the St. Lawrence Power Project, of which he has been the guiding genius, will be completed. "As an individual, he has earned the affection and respect of his colleagues and friends."

Dr. Holden, who joined Ontario Hydro in 1913, has been Chief Engineer since 1955. In 1944 he received the honorary degree of Doctor of Engineering from the University of Toronto for his services to the profession.

Representing the great family of

Hydro municipalities, members of the

O.M.E.A. and the A.M.E.U. this year will

hold their 50th annual meeting



O.M.E.A.

OVER the past 50 or more years, the scope of Ontario's publicly-owned electrical systems has more than fulfilled the expectations and aspirations of those far-sighted Hydro "pioneers," who, in the early years of this century, conceived the idea of a partnership between a central power commission and the municipalities.

This partnership was devoted to the task of making the benefits of electricity readily available to the people of Ontario. In making this ideal a reality, and in strengthening and extending Ontario's Hydro enterprise, the importance of the role played by the Ontario Municipal Electric Association has been consistently lauded.

At their 50th annual meeting in Toronto this year (March 15-18), O.M.E.A. members—in company with the partner Association of Municipal Electrical Utilities (of Ontario)—will commemorate their joint achievements and contributions to the building of a vigorous, province-wide electrical network.

The origin of the O.M.E.A.—the initials by which this association is generally known—is to be found in such organizations as the Niagara Power Union, the Eugenia Power Union, the Trent Valley Power Union and the Radial Association, which were formed in Ontario just after the turn of this century to champion the cause of a publicly-owned hydro-electric power system. The largest of these was the Niagara

POWER PAR



Electric Power Union, an organization composed of members of municipal councils and boards of trade, as well as private citizens, who shared a belief that the people of Ontario could best be served by bringing the province's water power resources under a system of public ownership.

Indeed, the origins of O.M.E.A. might be traced back to the Berlin Committee, formed in 1902 as a result of several investigational meetings into the feasibility of forming a co-operative for securing a supply of electric energy on the most favorable terms possible. Members of this early venture were: E. W. B. Snider, St. Jacobs; Daniel B. Detweiler, Berlin; and Alderman F. S. Spence, Toronto.

Their report presented at a Berlin meeting, in February 1903, to civic and industrial leaders from Berlin, Brantford, Dundas, Galt, Guelph, Hamilton, Hespeler, Ingersoll, London, Preston, St. Catharines, St. Mary's, St. Thomas, Stratford, Toronto, Waterloo, and Woodstock resulted in the passing of a motion which was presented to the provincial government. This provided the basis for an Act which authorized any two or more municipalities to appoint a commission to examine and report upon the desirability of establishing works for the production of power, heat, and light.

Under the terms of the Act, the Ontario Power Commission was formed by seven interested municipalities. In addition to the members of the Berlin Committee, the Com-

mission included such men as P. W. Ellis, first chairman of the Toronto Electric Commissioners, as well as experienced engineers who acted as consultants. Subsequently headed by Adam Beck (later first Chairman of Ontario Hydro), this organization conducted a campaign, which culminated in the presentation of a resolution to the provincial government urging the formation of a permanent Commission to handle "the construction, purchase of expropriation of works for the generation, transmission and distribution of electric power and light."

With the Commission established, however, the power unions did not pass out of existence. They continued to function in gathering and disseminating information on Hydro matters, attempting to broaden the scope of the Hydro partnership by bringing in more municipalities. In addition, they began to develop into an organization that would not only combat any legislation adverse to the municipalities' interest in Hydro, but also would endeavor to secure such legislation, as might be necessary from time to time, for the more efficient extension of Hydro services to the people of the province.

O.M.E.A. Formed in 1912

In 1910, the Commission began to supply power to Berlin, now Kitchener, and from that time on, the number of municipalities served by the Commission grew steadily. In 1912, as this Hydro "movement" gained ground, the power unions were enlarged to encompass other interests who were prospective mem-

bers of the growing family. This involved a complete reorganization, and the resulting body was renamed the Ontario Municipal Electric Association, the title by which it is known today.

In preserving the traditions of its predecessors, the O.M.E.A. has had an unbroken record of creative achievement. Where the power unions had played an important part in the campaign preceding the establishment of Ontario Hydro, the O.M.E.A. had an equally significant role in the Commission's first major power development at Niagara. It organized and secured a favorable vote from the various municipalities throughout Ontario urging construction of the Queens-ton-Chippawa plant, now known as the Sir Adam Beck-Niagara Generating Station No. 1. Moreover, this association was instrumental in having legislation enacted providing for this development under the auspices of the municipalities rather than those of the Ontario Government.

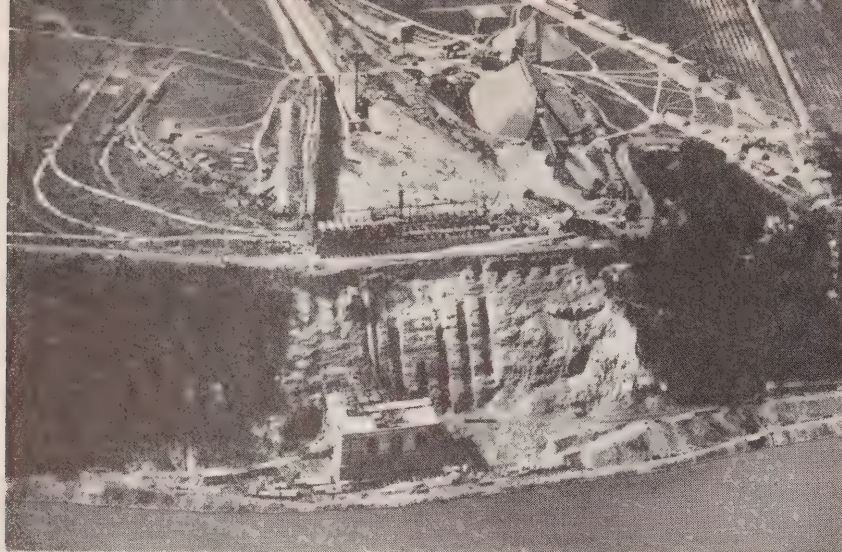
Safeguarding Hydro Interests

In subsequent years, the O.M.E.A. has not relaxed its vigilance in maintaining and safeguarding the Hydro interests of the municipalities, and promoting the successful operation of Ontario's great Hydro partnership. Campaigns have been carried on to secure legislation at Ottawa to establish the rights of the province to develop the waters within the province and along its boundaries by Ontario Hydro on behalf of the municipalities. In particular,

(Continued on page 14)

TNERS





ONE OF THE FIRST major achievements of the O.M.E.A. was successful agitation for a power development on the Niagara River. This led to construction of Ontario Hydro's Sir Adam Beck-Niagara Generating Station No. 1, in 1918. For many years it was the world's largest hydro-electric plant.

HYDRO SERVICE was inaugurated at Berlin (now Kitchener, Ont.) in 1910 as a result of a campaign conducted by the Niagara Power Union, a predecessor of the O.M.E.A. and A.M.E.U. Riding in Berlin's triumphal Hydro parade were (left to right): Hon A. J. Matheson, Provincial Treasurer; Mrs. Beck, Hon. Adam Beck, first Ontario Hydro Chairman, and C. H. Mills, M.P.P., Waterloo-North.

the association has successfully opposed various attempts by private interests to secure control of the power rights along the St. Lawrence, which is an inter-provincial as well as an international boundary, and urged so vigorously and persistently the cause of the preservation of these waterpower resources for the people of Ontario that this policy has been accorded unanimous acceptance. The O.M.E.A. has also opposed a great many private bills before both the Ontario Legislature and the Canadian House of Commons by which private companies sought to secure charters and water rights counter to the interests of the Hydro municipalities. The O.M.E.A. was a strong advocate of the purchase of the Ontario Power Company by Ontario Hydro, which took place in 1917. Representations and investigations, in which the O.M.E.A. participated, resulted in a saving of over \$300,000 in the settlement between Hydro and the Foshay interests in Bruce County.

O.M.E.A. Organization

The O.M.E.A. has two inter-related levels of operation. The basic organizational units are the eight district associations, which, between them, encompass those sections of the province to which the Commission supplies power. Each district has at least one annual meeting. There is, in addition, a central office for the parent association at Dundas, Ont. Each district elects



its own officers annually from among representatives of the member utilities within the district. The presidents of the district associations act as vice-presidents of the parent association. Similarly, the two district vice-presidents act as directors of the central group.

The central body, in turn, consists of an honorary president, who is the Chairman of Ontario Hydro, and such honorary vice-presidents, not exceeding six in number, as the association wishes to honor. In addition to the honorary positions, there are the posts of president, past president, a vice-president and two directors for each district (as indicated above)

and a secretary-treasurer. The association's first President was G. R. Geary, at that time Mayor of Toronto, and its original Secretary was the late E. M. Ashworth, formerly General Manager of the Toronto Hydro-Electric System, who was also the Secretary of the A.M.E.U. after that body was formed. For the past year, Bert Merson, Toronto, has occupied the President's chair, and D. P. Cliff, Dundas, is the association's indispensable Secretary-Treasurer.

The officers and directors of the association, elected as above, constitute the Board of Directors, and hold office for a one-year term and until their successors are elected.

Niagara Power Union

Guelph, Dec. 19, 1907/190

A. B. McBride, Esq.,

Clerk,

Waterloo Ont.

Dear Sir:-

I have received yours of the 16th and now write in reply. Meetings on the power question have been arranged as follows: St. Marys, Dec. 19th, Hamilton, 20th, London 23rd, Ingersoll 26th, Toronto, 28th; Brantford Jan. 2nd, Galt, Jan 3rd.

About the only evening left open that could be given Waterloo would be Friday, Dec. 27th and just about the right time before election. I think that Mr. Beck could give you that evening. If not, what other evening would meet your requirements. There are more meetings to be held than there are evenings. It is necessary to also hold meetings in New Hamburg and Hespeler and other points, but some other members of the Union will take charge of these if Mr. Beck is unable to do so. I will call you on the phone to-morrow morning after you have received this letter. I called you on the phone at 20 minutes to four to-day but neither you or the Mayor were in the office. Being unable to find you I have written this letter.

Yours truly,



THIS HASTILY-TYPED LETTER from J. W. Lyon, Guelph, Secretary-Treasurer of the Niagara Power Union, provides evidence that this organization was actively sponsoring meetings in several Ontario communities around 1907 to discuss the Hydro movement. A year later, as a result of these public gatherings, 14 municipalities signed the first contracts for power supply with the infant Ontario Hydro.

With the Board of Directors reside all the powers of the association, although some or all of these powers may be delegated to an executive committee.

Provincial Recognition

To strengthen the partnership between Ontario Hydro and the participating municipalities, the Ontario Government has recognized, from time to time, the desire of the O.M.E.A. to have representation on the provincial commission. In this regard, C. A. McGuire, who was President of the O.M.E.A. from 1923 until 1934, was also a Commissioner of Ontario Hydro from 1925 until 1934. W. Ross Strike, Q.C., Bowmanville, President of the

O.M.E.A. in 1944 and 1945, was appointed to the Commission in 1944. At present he is First Vice-Chairman of Ontario Hydro. More recently, Lt.-Col. A. A. Kennedy, who served as O.M.E.A. President from early in 1953 until 1956, and D. P. Cliff, President in 1950-1951, have been appointed as Ontario Hydro commissioners.

The current programs of the association cover a wide range of activities. While co-operation between the municipalities and Ontario Hydro is traditional and inherent in the nature of Ontario's Hydro enterprise, changing conditions have made it essential that O.M.E.A. members consistently keep

their sights on their main function as the direct representatives of the major segment of Hydro customers in the province.

Thus, in discharging this primary responsibility, they have presented many notable resolutions to Ontario Hydro, resulting in the formulation of new and important Commission policies. These resolutions, in many instances, have been based on the findings and recommendations of the present 12 O.M.E.A. committees, which are studying such matters as pensions and insurance; adequate wiring under the aegis of the Electric Service League of Ontario; labor relations; power costing and sales promotion.

Ontario Hydro's adoption of new methods of power costing, for example, is the direct result of approved proposals put forward by the O.M.E.A.

In 1944, the O.M.E.A. passed a resolution suggesting that money from the contingencies and rate stabilization fund be used to reduce the cost of power to certain small municipalities where the cost of electricity was relatively high. A committee was set up to study the resolution, and, at a special meeting later in the year, the membership authorized a voluntary levy of up to five cents a horsepower for this purpose.

In 1950, a resolution was passed urging Ontario Hydro to consider the establishment of an equalized rate for the transmission of power to all municipalities in the province. The method of costing power at that time was based on the principle that the cost of a facility was divided among the customers receiving benefits from it.

The Commission, which already had been studying this problem, introduced a functional method of power costing in 1951 after consultation with O.M.E.A. and A.M.E.U. representatives. This embodies the pooling of costs by function, such as high-tension and bulk transmission and power supply.

(Continued on page 16)



Recommendations by an O.M.E.A. committee played an important part in the establishment by Ontario Hydro of a pension and insurance plan for the municipal electrical utilities. The Municipal Hydro-Electric Pension and Insurance Committee is appointed by the provincial commission.

The Electric Service League of Ontario is supported financially by Ontario Hydro, which contributes on behalf of the municipalities. The extent of this contribution each year is determined by the O.M.E.A.

The Sales Promotion Committee also works in close liaison with Ontario Hydro on the "Live Better Electrically" campaign. This campaign was inaugurated by Ontario Hydro at the request of the municipalities, which pay for it indirectly in the cost of power.

Standard Construction

Another valuable contribution to the province-wide Hydro system has been made by the O.M.E.A. in its sponsorship of the "Guide to Municipal Standard Construction." In 1949, the Board of Directors of the O.M.E.A. requested the A.M.E.U. to study the possibility of standardizing the construction of the distribution systems in Hydro municipalities. This resulted in publication of a manual covering various technical

phases relating to distribution system construction techniques.

At its annual convention in 1954, the O.M.E.A. inaugurated the custom of presenting long-service awards to members of the association in recognition of their "contribution to the progress of the municipal Hydro systems." The first presentations—in the form of framed, illuminated scrolls—were made to commissioners with 25 or more years' service; in 1955, the presentations included those with records of 20 or more years as utilities commissioners. In subsequent years, the awards have honored those with service records of 15 years or over.

Bespeaking the devotion of these representatives of the O.M.E.A.-member utilities to their communities has been the fact that the ceremonies, in the past five years, have witnessed the presentation of scrolls to 152 commissioners (many of them "still in harness") with a combined service record totalling 3,158 years.

D. P. Cliff, the O.M.E.A.'s Secretary-Treasurer, at the forthcoming convention (March 15-18) will report that there was another increase in membership in the association during 1958. Of the 354 associated municipal electrical utilities, 313 held membership in 1958, an increase of 8 members over 1957.

These encouraging membership

statistics underscore very clearly the fact that the O.M.E.A. is carrying on the tradition it has established and maintained over the course of its entire history: in any year since its formation in 1912, the association has never failed to add to its membership. In the past, its steady progress has enabled it to play a role of key importance in the Hydro affairs of this province. And because of the O.M.E.A.'s ever-widening sphere of activities, its growing membership manifests the confidence that this organization will make a contribution of even greater significance in meeting the challenging problems facing the province's Hydro partnership in the years ahead.

A.M.E.U.

The Association of Municipal Electrical Utilities (of Ontario), like its sister organization, the Ontario Municipal Electric Association, traces its lineage directly back to the Niagara Electric Power Union, the largest and most influential of the groups, which sprang up in southern Ontario during the first years of this century to champion the cause of public power development and distribution. After the campaign had culminated in the creation of The Hydro-Electric Power Commission of Ontario, and when the partnership between the Commission and the contracting



GROWTH of the A.M.E.U. organization is indicated by this photograph of association delegates during their annual convention which was held at Niagara Falls, Ont., in 1922.

municipalities had been in successful operation for some time, it became evident that there were two more or less distinct aspects of this undertaking, which could best be organized separately at the municipal level.

Under its constitution, the Niagara Power Union had formed a special engineers' section. This subgroup consisted of any of the original members who were sufficiently interested in the engineering aspects

to attend the meetings, together with any of their associates in the project, who might be employed in the capacity of professional engineers or in performing an allied function. Meetings of this section were held periodically to discuss engineering problems—as distinct from the problems confronting the elected representatives of the municipal commission—and to ensure unanimity of the engineering “outlook” among the constituent local authorities.

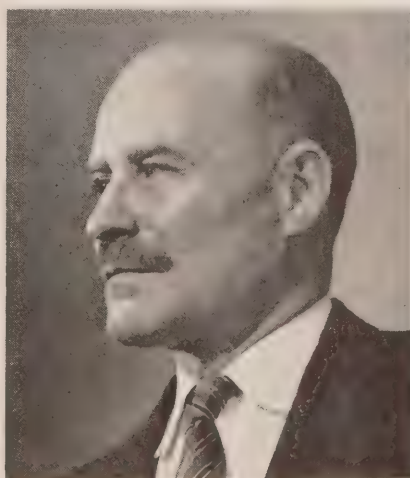
Although the original Niagara and allied Power Unions underwent a complete re-organization in 1912, forming the O.M.E.A., the engineers' section continued to function, but in an enlarged way, until 1918, when it became the Association of Municipal Electrical Engineers of Ontario. The following year, it adopted a new constitution and a new name, the Association of Municipal Electrical Utilities (of Ontario) by which it is known to this day. This separation of the original group into two organizations served to confirm the distinction, based on “division of labor” or specialized function, which had been evident within the power union ever since the formation of the engineers' section. With this re-organization, the relationship between the O.M.E.A. and the A.M.E.U. was clarified, the

(Continued on page 18)

CLOSER LIAISON has been maintained between the O.M.E.A. and Ontario Hydro by the appointment of these former association presidents to the Ontario Commission. Mr. Cliff is also present secretary-treasurer of the O.M.E.A.



W. ROSS STRIKE, Q.C.
First Vice-Chairman



LT.-COL. A. A. KENNEDY, D.S.O., E.D.
Commissioner



D. P. CLIFF
Commissioner

O.M.E.A. becoming the association of the elected representatives and the A.M.E.U., the association of the management and senior operating staffs, responsible for the daily administration of the municipal systems. While constituting separate organizations after 1919, the two associations continue to this day to work in close and cordial co-operation for the welfare of Ontario's electrical systems.

Dealing mainly with matters related to finance, organization and engineering, the A.M.E.U. provides a means or channel of information exchange between its members, making the experience of some municipal utilities, in connection with certain problems readily available to all members. Moreover, co-operation and collaboration on problems of common concern is fostered between the member municipalities, Ontario Hydro and the Ontario Municipal Electric Association.

Nine Regional Divisions

Where the O.M.E.A. is organized into eight district associations, the A.M.E.U. is divided into nine regional groups, with the boundaries of these regions corresponding to the regional boundaries of Ontario Hydro. In terms of organization, the A.M.E.U. further differs from the O.M.E.A. in that the province-wide association functions without there being a complete group of regional organizations acting as a base. At present, there are "local" organizations in the Niagara, Toronto, West Central, Western and Northwestern Regions. The Eastern and East Central Regions have a combined organization. These regional associations study, at the staff level, problems of accounting, engineering, rates and metering; they consist of staff representatives of local utilities and the Hydro regional office engaged in any of these fields of work. Regional executives, where already established, consist of a president, a secretary-treasurer and a varying number of directors.

In its province-wide aspect, the

IN RECOGNITION of their services, the A.M.E.U. has awarded honorary memberships to several of its former presidents. Here J. Clark Keith, Windsor (left), presents a scroll to R. S. Reynolds, Chatham, president of A.M.E.U. in 1938.



A.M.E.U. has an executive, elected by ballot, composed of one director from each region, three directors-at-large from the whole province, a president, three vice-presidents, and a secretary-treasurer. In addition, there is a President's Council, consisting of four past presidents of the provincial association. The association's first President was P. B. Yates, formerly Manager of the St. Catharines Public Utilities Commission. In 1948, he was made the first honorary member of the association. At present, the presidential gavel is in the capable hands of J. A. Williamson, General Manager of Niagara Falls Hydro-Electric Commission. Of interest, too, is the fact that the first Secretary of the A.M.E.U. was the late E. M. Ashworth, formerly General Manager of Toronto Hydro, who was, at the same time, the Secretary of the O.M.E.A. His fine work is being carried on at present by W. R. Mathieson, Toronto, as Secretary-Treasurer.

The A.M.E.U. functions in terms of the committees into which it is divided, with each committee re-

sponsible for a specific phase of the Association's activities. The recent revisions in resale rate structures, which were undertaken to eliminate a number of inequities and anomalies that had crept into the resale rates as a result of piecemeal adjustments over the years, provide an excellent example of this *modus operandi*. The rates finally adopted by the Commission were based on the recommendations of the association's Rates Committee, as well as on recommendations made by Hydro's Rate Study Engineer and approved by the A.M.E.U. Committee.

Another achievement of far-reaching significance was the publication in 1955 and 1956, after several years of work and study on the part of the A.M.E.U. Municipal Standards Committee, of the first and second sections of a "Guide to Municipal Standard Construction." Since that time, copies have been distributed to all member utilities in Ontario. This valuable reference manual also attracted widespread attention among representatives of many electrical systems and manufacturing

LIKEWISE, the O.M.E.A. has honored long service to the municipal electrical utilities by presenting special awards to several members. Here G. L. Foulds, Paris (left), watches as O.M.E.A. Secretary-Treasurer D. P. Cliff congratulates four other 1958 recipients: J. C. Barr, Sarnia, Thomas McCord, Point Edward, Dr. A. C. Anderson, Strathroy, and Thos. McLaughlin Palmerston.



groups throughout North America, who have made arrangements for the purchase of the book.

Major Project

Another A.M.E.U. project of major significance was first undertaken in 1955, with the inauguration of a load study to appraise anticipated increases in municipal electrical loads, and to determine the best types of equipment and other facilities to meet the situation. Similarly representations on the part of the A.M.E.U. committees have resulted in an agreement with the Canadian Electrical Association and the Canadian Standards Association, whereby these groups work closely to eliminate duplication of effort and to exchange information.

Structure Re-organized

To handle the augmented work load associated with the expansion of municipal utility facilities, the A.M.E.U., in 1956, completed re-organization of its committee structure. Today, the association has some 30 committees working under four main sections (which form the link with the executive committee).

These four sections are designated: Finance and Office Administration, General Administration, Engineering, and Association Operations. Representatives of Ontario Hydro are members of nearly all sub-committees, which deal with such subjects as: accounting, billing, customer relations, accident prevention, merchandising, pension and insurance, public relations, rates, load study, system planning and communications.

One of the main activities of the Finance and Office Administration Section is its sponsorship of two important annual conferences for the accounting and administrative staffs of the municipal utilities. These meetings are held at various points in both the eastern and western sections of southern Ontario under the direct supervision of local committees, and include profitable discussions on problems and methods relating to billing, customer and staff relations, accounting and other administrative matters.

The annual summer technical conference, sponsored by the En-

gineering Section, has become an institution. This conference is geared to fulfil the requirements of utility engineering and managerial representatives.

In 1958 the Engineering Section inaugurated a new type of "traveling circus" or regional workshop for foremen and superintendents of the smaller utilities. These workshops, featuring lecturers recruited largely from the ranks of the association's commercial membership, embraced discussions of many practical methods of electrical distribution.

Another 1958 highlight was the Engineering Section's Institute of Electric Space Heating in Toronto. This important gathering brought together many experts to provide utility representatives with basic technical data and information on all phases of the field of automatic electric heating.

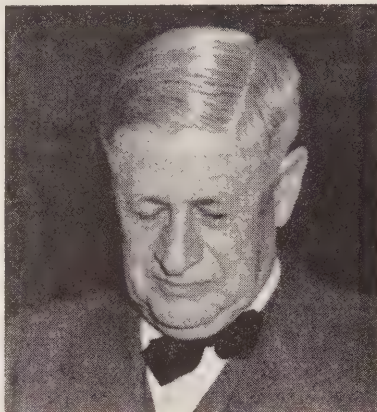
Indicative of the growth of Ontario's electrical systems in recent years, membership in the A.M.E.U. at the end of 1958 was recorded as the largest in the association's history, embracing 272 municipalities. Of this number, 125 took an active part in committee work and A.M.E.U. members participated in about 200 meetings.

Today, the A.M.E.U. is regarded as the largest technical electrical organization in the world. But size alone is not the most important criterion of an organization's success; its record of achievement must be examined as well. And in terms of accomplishment and of its contribution to the progress of Ontario's public power system, members of the A.M.E.U. are proud of the part it has played in the development and improvement of electrical services in this province. Prodigious tasks lie ahead, involving a seemingly endless series of problems requiring study by A.M.E.U. committees. However, the affiliated members are confident that it is admirably equipped to find solutions to these problems of the future as it has in meeting many challenging situations in the past. ■

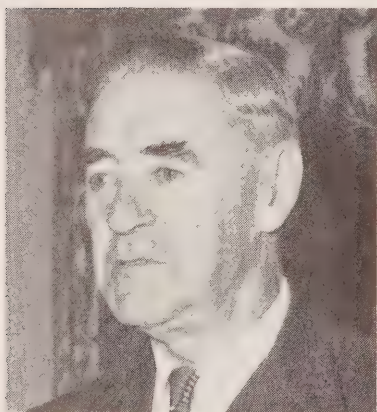
O.M.E.A. - A.M.E.U.



G. R. GEARY, Toronto,
First President of the
O.M.E.A.



P. B. Yates, St. Catharines,
First President of the
A.M.E.U.



BERT MERSON, Toronto,
1958 O.M.E.A. President



J. A. WILLIAMSON, Niagara Falls,
1958 A.M.E.U. President



E. M. ASHWORTH, Toronto,
First Secretary-Treasurer
O.M.E.A. — A.M.E.U.



W. RONALD MATHIESON, Toronto,
Secretary-Treasurer, A.M.E.U.

THE record would not be complete without mentioning those men who have occupied the President's chair of both the Ontario Municipal Electric Association and the Association of Municipal Electrical Utilities.

O.M.E.A.—Past Presidents

1912—G. R. Geary, Toronto;
1913—J. W. Lyon, Guelph; 1914—Philip Pocock, London; 1915-1919—T. L. Church, Toronto; 1919-1920—W. K. Sanderson, St. Thomas; 1921-1922—P. W. Ellis, Hamilton; 1923-1934—C. A. Maguire, Toronto; 1935—Jas. Simpson, Toronto; 1936-1937—F. C. Elliott, Ingersoll; 1938-1939—G. S. Matthews, Peterborough; 1940-1941—Dr. W. J. Chapman, St. Catharines; 1942-1943—K. A. Christie, Toronto; 1944-1945—W. R. Strike, Bowmanville; 1946-1947—R. M. Durnford, Sarnia; 1948-1949—G. F. Hutcheson, Huntsville; 1950-1951—D. P. Cliff, Dundas; 1952—F. H. Plant, Ottawa (Died in office); 1953-1954—Loftus H. Reid, Toronto (Died in office); 1954-1956—Lt.-Col. A. A. Kennedy, Owen Sound; 1956-1957—Gordon H. Fuller, Windsor; 1958-1959—Bert Merson, Toronto.

Secretary-Treasurers

The late E. M. Ashworth, former General Manager of the Toronto Hydro-Electric System, the first Secretary-Treasurer of the O.M.E.A., was succeeded by T. J. Hannigan, Guelph, who held the position from 1914 to 1940. Miss Kathleen Ciceri (later Mrs. Kestell) capably filled the role until 1948. Succeeding W. R. Mathieson, who served temporarily, George F. Hutcheson, Huntsville, assumed the duties for a two-year period. In 1952, D. P. Cliff (now an Ontario Hydro Commissioner and also a former O.M.E.A. President) took over from Mr. Hut-

(Continued on page 32)



LET'S CHAT



With Lois Hurst of Anne Allan's Hydro Homemaker Service

IN THE realm of cooking, food preservation, laundry, lighting, heating and home decoration, no one is more important than the lady of the house.

A recent conference of some 250 women in Chicago, Ill., attended by the writer, provided delightful evidence that a veritable galaxy of new, electrical appliances will soon be helping to make the housewife's many tasks even easier—in fact almost a pleasure!

Sponsored by the Edison Electric Institute, this third annual gathering of home economists associated with electrical utilities, appliance manufacturers, lighting companies and homemaking magazines from many sections of the United States as well as Canada, provided a valuable opportunity to exchange ideas on new methods of promoting better electrical living.

The youth of today are the customers of tomorrow and some utilities believe in "catching 'em young." From Honolulu came a report of programs for teenagers, girl and boy scouts, brownies and cubs. Even kindergarten children bake cookies shaped by a Reddy Kilowatt cutter!

Several utilities have developed special load-building programs. In San Francisco, the home service department of one utility started a "better breakfast" campaign after nutritionists reported that 40 per cent of the population was not eat-

ing an adequate breakfast. This served the dual purpose of helping to improve nutrition, while encouraging greater use of electric ranges during a low load period.

In Oklahoma, a local utility presented a portable electric heater to the parents of children born on specific dates. In Louisiana, tours of well-designed, all-electric kitchens in private homes proved immensely popular. Electric home heating has been actively promoted in Indiana since 1954.

After two days of concentration at the all-day sessions, delegates welcomed a change in tempo in the form of a tour of the major appliance displays in the Merchandise Mart. The new 1959 lines competed for the attention of the visitors with the prototypes of many new appliances still not in production.

The star of the show was the experimental ultrasonic dishwasher, which will wash dishes in cold water by means of sound waves pitched far above those detectable by the human ear. Another innovation, not yet on the market, is an automatic, three-section kitchen "appliance wall." This unit incorporates a refrigerator, freezer, two dishwashers, sink, disposal unit, in addition to two ovens and four counter top elements, which operate with heavy plastic punch cards. By putting appropriate cards in a slot the homemaker automatically cooks meats, vegetables etc., in the ovens or on

the elements. Both the time and temperature are controlled by the punch card setting.

Recipes inevitably crop up whenever home economists gather, and this conference was no exception. Here is a particularly tasty seafood dish, which is appropriate for the Lenten season:

TUNA SHORTCAKE

- 2 cups tea biscuit mix
- 1 cup milk
- 3 eggs
- 1/2 teaspoon salt
- 1/8 teaspoon pepper
- 2 7-ounce cans tuna
- 1 tablespoon chopped onion
- 1/2 cup grated sharp cheese
- 1/4 cup chopped pimento
- 1/3 cup chopped celery

Heat oven to 400°F. Grease a 9-inch square baking dish or 11 x 7-inch baking dish or 9-inch ring mould. Blend biscuit mix, milk, eggs, salt and pepper. Beat vigorously 30 seconds. Flake tuna with oil. Mix into batter 1½ cans tuna, ¼ cup cheese, onion, pimento and celery. Spread batter in prepared pan. Sprinkle the remaining ¼ cup cheese over top. Bake 30 to 35 minutes. Serve with tuna sauce. 8 servings.

Tuna sauce: Gradually add 1-2/3 cups milk to 2 tablespoons tea biscuit mix, ½ teaspoon salt, ¼ teaspoon pepper and remaining ½ can of tuna. Heat and serve. ■

PIE PRIZES

ANN HESLOP — CANADIAN CHERRY PIE CHAMPION

ANNE Heslop CAN bake a cherry pie. In fact, judges have acclaimed her cherry pie as the best in Canada.

Their opinion followed the finals in a cherry pie baking contest in Toronto, and Miss Heslop can provide proof positive of her baking prowess. Not that her fellow-students at the Ontario Agricultural College in Guelph need any proof. A second-year student in Home Economics at Macdonald Institute, Miss Heslop divided her practice cherry pies among her friends, who declared every bite was of championship quality.

In the same contest, three other young "sisters of the skillet" proved they, too, could bake a delicious cherry pie. Tied for second place were Miss Louise Hill, in her last year of Home Economics at the University of Western Ontario, London, and Miss Jane Watson, a Grade XI student at Collingwood District Collegiate. Miss Carole Owen, Downsview Collegiate, Toronto, placed third.

The cherry pie baking contest, sponsored this year by Ontario Hydro in co-operation with the Toronto Hydro-Electric System and the Canadian Red Cherry Institute, has been a regular event for four years.

Last November, more than 250 teen-aged girls started baking cherry pies in 23 high schools and two universities. The 25 winners "baked-off" in a series of four regional contests, held in the appliance showroom of Toronto Hydro, until eight finalists remained.

Four of the finalists were winners. The others were: Donna Atkinson, Bloor Street Collegiate, Toronto; Esther Acheson, Peterborough District Collegiate; Marilyn Jones,

Brantford Collegiate Institute; and Marilyn Thomas, Ingersoll Collegiate Institute.

The Canadian cherry pie baking championship brought Miss Heslop more than glory. One of her prizes was an electric range presented by Chairman James S. Duncan on behalf of Ontario Hydro.

A \$300 scholarship in Home Economics, a trip by air to observe the United States national cherry pie-baking contest in Chicago and another flight to Ottawa to present the prize-winning cherry pie to Hon. Ellen Fairclough, Canada's Minister of Citizenship, were donated by the Canadian Red Cherry Institute.

For her school, Miss Heslop received the Monarch Trophy, donated

annually by Maple Leaf Milling Co. Ltd. Other prizes included a wrist watch from Canada Packers Ltd., and a tour of the Betty Crocker test kitchens in Minneapolis as the guest of General Mills Inc.

The two second prize winners received \$100 each and the third prize winner received \$50, donated by the Canadian Red Cherry Institute. All eight regional winners received plaques from Maple Leaf Milling Co. Ltd.

How does Miss Heslop plan to use her prizes? "My mother (Mrs. J. C. Heslop, Weston) is making plans for the stove," she says. "The scholarship will help me at school next year and the wrist watch should get me to classes on time." ■



CHERRY PIES were probably the topic of conversation between Ontario Hydro Chairman James S. Duncan and Miss Anne Heslop, who won the baking championship. Toronto Hydro Chairman Bert Merson listens in to get a few cooking tips. Hydro donated the range as first prize.

THE PROOF OF THE PIE



THE CHAMP displays a victory smile, her winning pie and her prizes.

THE proof of the pie is in the method to paraphrase an old saying. Canada's champion cherry pie baker, Miss Anne Heslop, used the following recipe to produce her prize-winning pies:

CRUST (for 9-inch pie plate)

- 1¾ cups pastry flour
- ½ cup all-purpose flour
- 1 teaspoon salt
- ¾ cup shortening
- 5-6 tablespoons iced water (approximately)

FILLING

- ½ cup plus 2 tablespoons granulated sugar
- 3 tablespoons cornstarch
- ¼ teaspoon salt
- 3 tablespoons cold cherry juice
- 1 cup hot cherry juice
- 1 tablespoon butter
- ¼ teaspoon almond extract
- 5-6 drops red food coloring
- 2½ cups frozen cherries, drained and thawed (2-15 ounce cans)

METHOD

Sift and measure the flours. Add

salt and resift. Measure shortening by the water displacement method. Cut in approximately one-half of the shortening until it is the size of coarse cornmeal; cut in the remainder until the size of large peas. Measure ice water; sprinkle over the flour mixture, a teaspoon at a time, and toss lightly with a fork. Shape into two balls using waxed paper. Refrigerate the dough.

Mix dry ingredients for the filling; add cold juice and mix to form a smooth paste. Heat remainder of the cherry juice over hot water. Roll the pastry for the bottom crust and place on the plate. Roll out the remainder and cut into strips for the lattice top. Add heated juice to the paste mixture gradually. Stir to combine and cook over direct heat until relatively clear and thickened, stirring constantly. Remove from the heat immediately; stir in butter, flavoring and coloring; add cherries.

Put into unbaked pie crust. Attach strips to moistened lower edge to form a lattice top. Attach edging

and decorate. Bake in an electric range at 425° Fahrenheit, in a pre-heated oven, for 25-30 minutes. ■

EXPRESSES APPRECIATION

MACDONALD INSTITUTE
Guelph, Ontario.
February 12, 1959

Mr. J. S. Duncan,
Chairman,
Ontario Hydro-Electric Power
Commission.
620 University, Ave.,
Toronto, Ontario.

Dear Mr. Duncan:

I wish to express my sincere appreciation for the lovely Tappan range presented to me on January 30th. It was a real privilege to win such a fitting prize and I know that I shall always enjoy working with it.

Although I will not be setting up my own home for several years, I do plan to have my range used in my parents home in the interval. My mother laid a good foundation for my baking skills and in this way I hope to share some of my success with her.

Thank you once again, and I can only hope that my future progress in the field of Home Economics will be in accordance with the start that you have given me.

*Yours sincerely,
Anne Heslop.*

ELECTRIC

"TURN on the heat" is a colloquialism which is acquiring a very literal meaning these days, especially in electrically heated homes.

For example, the pleasant warmth provided by various types of electric units in these homes can be controlled in each room by simply turning small, unobtrusive thermostats. In other words, the temperature can be maintained at "50" or lower in one room, and at "70" or higher in another, as desired, enabling both the "Eskimo" and the "hot-house plant" to be happy under the same roof.

Automatic electric heating, however, is but one of a number of "dream" features, which are being built into most of the all-electric homes now under construction in Ontario. While such houses have been or are being built in many



ARRIVING at the all-electric, model home in Blossom Gardens, west of Toronto, two house hunters receive a warm welcome from builder George Pattison

Ontario Hydro arranges for Inspection of Public Home at Blossom Gardens model Gold Medallion subdivision



MR. PATTISON and V. A. Beacock, Toronto Township Hydro-Electric Commission, show the young visitors the inside of the electric heating unit in the living-room.

ONTARIO HYDRO NEWS

HEATING ON PARADE

BY WILLIAM RATTRAY

communities, including London, Kitchener, Guelph, Almonte, Milverton, Beeton, Amherstburg, Oshawa and Alliston, and many others, the first subdivision in which they will predominate is located at Cooksville's Blossom Gardens, a few miles west of Toronto.

Coinciding with this year's observance of National Electrical Week (February 8-14), Ontario Hydro made arrangements which enabled the public to see and learn about the many features built into modern all-electric homes. With the close co-operation of Toronto Township Hydro-Electric Commission and George W. Pattison, the builder of the Blossom Gardens subdivision, an attractive, split-level dwelling was opened for inspection for several weeks, commencing on February 9.

Completely furnished for public

viewing, this home is located at 2485 Edenhurst Drive, Cooksville, a short distance south of the Dundas or No. 5 Highway.

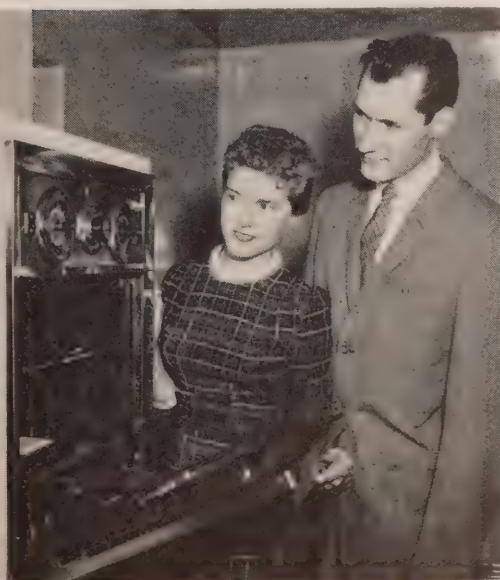
Approximately 100 homes will be built by Mr. Pattison in Blossom Gardens over the next two years, and 75 per cent of them will be "all-electric." Many will bear Gold or Bronze Medallions. These emblems were created by the electrical industry to assist buyers to readily identify homes guaranteed to contain top-quality electrical capacity and equipment. Before such an emblem is placed, the home is inspected by the local electrical utility, with special attention being given to wiring, lighting and appliances to determine that they are in line with today's standard of modern living.

A Gold Medallion on a home indicates that it has scientifically plan-

ned lighting; at least five major appliances installed with circuits available for five more, and a "Red Seal" standard of wiring, guaranteeing "full housepower."

The Bronze Medallion guarantees room-by-room "light conditioning"; at least one major appliance installed, with circuits available for five more, and "full housepower" with the "Red Seal" standard of wiring.

The model home, which is open for public inspection at Blossom Gardens, bears the Gold Medallion, and contains 1,385 square feet of living area, with attached double garage. Pink brick veneer with chocolate brown panelling, and a twilight blue roof combine to create an arresting exterior color scheme. There are, of course, convenient electrical outlets for Christmas out-



TO THE LADY OF THE HOUSE, the kitchen in the model home is a "dream". It didn't take her long to find the built-in oven.



LIKE a modern "Alice in Wonderland", the young wife called her husband to examine the new automatic electric washer and dryer.



A MOMENT'S REFLECTION proves that you can get six from two in the handsomely-appointed bathroom of the Gold Medallion home, placed on display during National Exhibition Week.

door lighting and other purposes. The aluminum, double-glazed windows are equipped with screens, and the walls are 10 inches thick.

While this electrically-heated model home can be inspected during the daytime, it will also be open evenings when the illumination can be seen to advantage.

The name "Blossom Gardens," given to the subdivision in which it is located, is particularly appropriate, Mr. Pattison states. He pointed out that it was once an area of beautiful orchards and that in planning the subdivision, special attention had been given to the preservation of many fine trees. All services are in and fully paid for, he said. Another important feature stressed by Mr. Pattison is that Blossom Gardens is conveniently located in relation to transportation facilities and direct routes to Toronto.

There are actually four levels in the model home, if one includes the laundry room, which is a few steps down from the kitchen at garage

level. From the laundry room level, one can enter the garage or go through a door into the back garden.

A few steps down from the laundry room level is a divided basement. The ceiling and walls of the recreation room area are plastered and painted, while the floor is also painted. In the basement, there are a workshop section, fruit cupboard, an open fireplace and six electrical outlets. It is entirely clear of conventional equipment usually found in a basement. This is, of course, a feature of homes in which electrical heating is installed. In this connection, Mr. Pattison points out that the resultant saving in space is equivalent to that of an extra room.

The dual electric service panel is conveniently located in the double garage.

Spacious Kitchen

Upon passing through the attractive front entrance, the visitor steps up and, straight ahead, is the entrance to a spacious kitchen. There

is lighting over two working sections as well as over the dining area. In addition to the installed electrical equipment in the kitchen, including a clock, there are five electrical outlets. About two feet above floor level is a door to a large broom cupboard, equipped with shelves.

To the right of the front entrance is a partial, solid divider and an L-shaped living-dining room. Above the divider is ornamental lighting. Over the entire length of the double-glazed window is concealed cornice lighting, while illumination is provided in the dining area, as it is in all rooms. In the living-dining room there are six electrical outlets.

Through a door in the dining section is a panelled den, which is equipped with built-in desk and bookcases.

To the left of the front entrance is a tiled powder room and, up a few steps, are the bathroom, three bedrooms and a hall cupboard with louvered door. In the living and sleeping areas, heating comes from electric units which fit in as part of the decorative baseboard. In the bathroom, it is provided by a unit, which fits flush into one of the walls. On each unit is a thermostat, which enables one to set the desired temperature that is automatically maintained.

One of the "surprise" or "hidden" features of the bathroom is discovered only when the shelf section inside the large medicine cabinet is swung open. Back of it is a storage space the size of a large cupboard.

Explaining the principle of electric heating, engineers point out that the electricity flows through metal fins, tape or wire. The metal resists the passage of electrical energy. As a result, a fireless, smokeless, clean heat is created. Engineers also emphasize that this is an even heat, which warms directly and that it is highly efficient as every unit of electricity is quickly converted into heat.

While there is a wide variety of

electric heaters, the more popular types include, Baseboards, Heating Cable, Glass Panels and Fan Type Units. There is, of course, the versatile Heat Pump, which cools as well as heats.

Baseboards are used, for the most part, in the model home at Blossom Gardens. These have heating elements inside the hollow metal baseboard. Through openings at the top and bottom, cool room air flows in and warm air flows out. Because they blend with the decorative scheme of each room in which they are used, baseboard units are inconspicuous and save space, making it possible to have any desired arrangement of furniture. These elec-

tric heating units range in length from two to eight feet, depending upon the area to be heated. Installation is simple, involving only a few screws and connection to electric wiring. It does not involve any major adjustments in the wood frame-work of a home, for only small holes have to be made to permit passage for the wiring.

Insulation Emphasized

Mr. Pattison, who originally comes from Newcastle-on-Tyne, England, and who started building homes on this continent in 1924, strongly emphasized the importance of insulation in the electrically-heated home. He pointed out that the specifica-

tions call for six inches in ceilings, four inches in walls and two in floors.

Major electrical appliances, which form part of many Gold Medallion homes, including the model one at Blossom Gardens, are as follows: built-in oven and range, refrigerator and automatic washer and dryer, and water heater. These are, of course, in addition to an exhaust fan and all interior and exterior lighting fixtures, and convenient outlets to be found in the house, which stands on a lot 60 feet wide by 125 feet deep.

While he has plans available for both split-level and bungalow-type all-electric homes, at prices ranging from \$18,500 to \$23,000, Mr. Pattison derives keen personal satisfaction from undertaking custom-built-homes to meet the specific needs of a family.

As a builder, he feels that electrically-heated homes represent a most significant contribution to greater convenience and comfort and a fuller enjoyment of home life. "As a matter of fact," he said, "it is a safe, healthy way to heat a house or almost any building that is designed for electric heating. Furthermore, it is not only clean and efficient but it eliminates many maintenance costs one has to meet in the average home and is actually more economical than most people realize."

The development of electric space heating is generally recognized as one of the most progressive trends in modern living.

Three all-important factors are known to have provided the strong and increasing impetus back of this trend in Ontario. The first is to be found in the announcement made by Hydro last year that the monthly service charge of \$4 a kilowatt for electric space heating had been eliminated and a new rate schedule introduced. Those using electricity to heat less than 25 per cent of a dwelling's floor area now have such

(Continued on page 28)



SO PLEASED WERE THEY with the all-electric home that they couldn't resist reaching for the telephone in the panelled den off the living-room to tell a friend about its numerous features.



Toronto, Ontario.
4th February 1959.

It is a realization that electricity plays such a part in every aspect of our country's daily life, that it is fitting to observe the celebration of National Week, February 25th to March 1st. Important has become our economy and we believe that it is a sound investment to be able to rely without this on a product of our natural resources and initiative.

In this province of Ontario, electric energy has been developed at a rate which we have but the firm evidence of the power of our abundant water, hydro power, and the great potentialities of our coal, the fact that we are proud of the untapped fact that we have had a great deal of the great public utility of the world.

Today, we stand upon the threshold of even greater progress, the great progress of the first half-century of this progress will be a continued and increasing power to our homes, our farms and our industry.

The electrical utilities, manufacturers, dealers and the public, all have a part to play in this progress. We wish to pay tribute to their conscientious and successful efforts, and to the leaders of the public who are making living is concerned.

Leslie M. Frost
Prime Minister of Ontario



PRIME MINISTER SUPPORTS NATIONAL ELECTRIC WEEK

ELECTRIC HEATING ON PARADE

(Continued from page 27)

energy registered on existing meters and are billed at current domestic rates. Those heating more than 25 per cent of a dwelling's floor area have the energy metered separately, and are billed at a special rate. For rural domestic customers of Ontario Hydro, this rate is 1.5 cents net a kilowatt-hour. For domestic customers of municipal utilities, rates may vary slightly, but the minimum is 1.5 cents net a kilowatt-hour.

The second important factor influencing the trend towards electric space heating is to be found in the statement made by Commission Chairman James S. Duncan last fall: "The days of too little electricity to meet the demand are over."

A third factor is the increasing public interest in building heating, reflected in the mounting number

WESTERN ONTARIO'S FIRST

COINCIDING with the observance of Canada's National Electrical Week, Western Ontario's first Gold Medallion electrically-heated home (shown in the accompanying photograph) at London was officially placed on public view during February. Participating in the ceremonies were (left to right): Reeve John H. Gillies, London Township; R. M. Laurie, Manager of Ontario Hydro's Western Region, and Joseph Jeffries, Q.C., President of the Chamber of Commerce of Greater London, who cut the ribbon to open the new house on London's western outskirts. The home, which has been attractively decorated and furnished, will remain on display for several weeks.



of enquiries received by Ontario Hydro and local utilities. These enquiries come not only from private citizens, but from companies, school

boards and various organizations seeking information about space heating of homes, offices, schools, farms and other types of structures. ■

FOTO-NEWS



▷ **RETIREMENT CHEQUE** - After 29 years' service, John R. Weare, Office Manager of Stamford Public Utilities Commission for several years (center) receives his first retirement cheque from Richard Jones, Commission Chairman. At right is James Wincott, last year's Chairman.



▷ **SERVICE SCROLL** - Ontario Hydro and Rodney P.U.C. honored George Mistele Superintendent and Secretary of the local utility, at a testimonial banquet recently. Known locally as "Mr. Hydro," Mr. Mistele had, except for a short period in the 1920s, been associated with Hydro since 1915, and was presented with a 25-year scroll from Ontario Hydro. From left, are: K. G. Phoenix, Hydro's West Lorne Area Manager; Chairman Verne Frank, Rodney P.U.C.; Mr. Mistele; Dalton Smith, Hydro's Western Region, London; Reeve Albert Liebner and Roy Ward, an early associate of the guest of honor.

▷ **LIGHTING PRIZE** - Ontario winner of the 1958 Medallion Home Lighting Contest—J. N. "Jake" Hanemaayer of Kitchener—is shown here receiving a plaque and cash award from J. J. Caragata of C & M Products, sponsors of the contest, on the right is Mrs. Hanemaayer. On the left is J. W. Kerr, Chairman of the Electrical Bureau of Canada, which will sponsor the contest in 1959. The presentation was made at the National Home Builders Convention in Montreal.



▷ **25-YEAR SERVICE RECOGNIZED** - At a recent gathering, members of the staff of Welland Hydro-Electric Commission applauded the presentation of a watch to a fellow-employee, Joseph Taylor, in recognition of a quarter-century of service. Mr. Taylor (left) is shown receiving the watch from Mayor G. J. Maccomb (right). Chairman H. W. Walker was present.

ALONG HYDRO LINES



Downtown London Increases Load

Air-conditioning and store renovations helped to increase downtown electrical load in London's downtown area by 12 per cent in 1958. In the residential areas the per capita consumption is rising steadily as more and more automatic washers and dryers and other home appliances are coming into use.

To cope with this extra demand, the London P.U.C. laid more than five miles of cable in the downtown area as part of a four-year plan to double capacity in this section of the city.

Late this year or early next year the new Wellington Square shopping centre will be opened. It is anticipated that this will mean the largest single increase in power demand the London utility has ever experienced in the network area—equal to about 25 per cent of the existing downtown load.

Hydro Builds New Peterborough Headquarters

Ontario Hydro is promoting winter employment by proceeding with construction of new office and service buildings for its Peterborough R.O.A. staff.

"The new buildings and location will give us more space, and by bringing our office and warehouse together, will enable us to operate more efficiently. The location selected will also reduce lost time travelling through city traffic and will improve customer service," Area Manager Robert H. Aspinall said recently. Plans call for a one-story brick office building, 58 feet by 40 feet, with a basement. The concrete-block service building will be a one-story structure, 85 feet by 55 feet.

St. Thomas Utility Staff "Adopts" Korean Orphan

Ae Sun Lee, a Korean war orphan, has 15 foster parents, all members of St. Thomas P.U.C. staff.

The group adopted 14-year-old Ae Sun through a program sponsored by the Unitarian Service Committee of Canada by making a \$60 contribution to provide her with food, clothing, education and medical care for a whole year.



AE SUN LEE

In their role as foster parents, the utility staff has already sent a letter to Ae Sun, who lives with 51 other war orphans in Pubwon Orphanage, near Seoul. For Christmas, they sent a money order for five dollars to the home so that Ae Sun could buy herself a Christmas present.

FORMER COMPTROLLER DIES

Hobart P. L. Hillman, 81, who was Comptroller for the Toronto Hydro-Electric Commission for 30 years before retiring in 1942, died recently as the result of a stroke.

Regions Name New Sales Superintendents

Appointment of G.K.F. Pepper as Sales Superintendent for the Toronto Region was announced recently by Manager Adam W. Smith. Mr. Pepper will specialize in sales problems, and will assist the present Consumer Service staffs in the inauguration of vigorous sales programs by municipal utilities and Hydro's rural area offices. G. D. Robertson will succeed Mr. Pepper as Consumer Service Superintendent, and will be responsible for the western section of the Toronto Region.

O. S. Luney, Manager, Eastern Region, has announced appointment of R. C. Loucks as Sales Superintendent in that region. He will be succeeded as Consumer Service Superintendent by B. I. Graham, who will have approximately the same territory.

Eastern Region Staff Wins Safety Award

Nearly two million man-hours, with the lowest accident rate in Ontario Hydro's nine regions, won Eastern Region a safety award at the region's annual safety conference this year. Manager O. S. Luney accepted the plaque from W. Ross Strike, First Vice-Chairman, Ontario Hydro, who was guest speaker at the recent conference. During 1958, 1000 employees of the Eastern Region worked 1,951,763 hours with only four accidents. This represents an accident frequency of two per million man-hours worked.



BUY EASTER SEALS

ONTARIO HYDRO NEWS

Lindsay Hydro Sponsors Contest

Lindsay Hydro-Electric Commission will sponsor an elementary school public speaking contest on the subject of the applications and benefits of electricity. Lindsay commissioners recently approved an expenditure of approximately \$200. First, second and third prizes of \$15, \$10, and \$5 respectively will be awarded in seven categories, while the winners will be eligible to compete in regional and provincial competitions. The latter competition will be sponsored jointly by Ontario Hydro and the Ontario School Trustees and Ratepayers Association (see *Ontario Hydro News* — October, 1958).

Chatham Expands Hydro System

Chatham Public Utilities Commission is carrying out an expanded capital works program to provide service to 1,800 new customers in suburban areas recently annexed by the city. Climaxing more than a year of planning and development, the expansion of the Chatham utility's electrical system entails some 18 different projects and an estimated expenditure of \$692,450. These include a new 27,600-volt feeder line from Kent T.S. to the northern part of the city where a proposed 5000-kva residential substation is to be constructed. There is also an extensive street lighting program planned in the newly-annexed area.

Port Credit Manager Passes

E. S. McNeice, P.Eng., who was associated with Port Credit P.U.C. for more than two decades, latterly as manager, died recently in Hamilton General Hospital after a brief illness.

Born in Toronto, he was a member of the Association of Professional Engineers of Ontario. He also took an active part in the affairs of his community, serving on the board of education and the village council. He is survived by his wife, three sons and one daughter.

PUBLIC SPEAKING TROPHY

DONALD Watt, Chairman of the Orangeville Hydro-Electric Commission, (left), presents the James Henderson Trophy to Bob Kearns, President of the Students' Council of Orangeville District High School. Designed to recognize the 20-year service record of the late James Henderson as a Commissioner with the Orangeville utility, the trophy will be awarded annually to the Grade IX student obtaining highest points in public speaking.



PLAN NEW AREA OFFICE AND SERVICE CENTRE

ESSEX, Ont., located approximately in the centre of Essex County, has been chosen as the site of a new Ontario Hydro area office and service centre. The new building will be completed later this year at a cost of some \$150,000.00. It will serve as headquarters for a staff of approximately 150, who will serve all rural customers in Essex County.

By the end of 1959, total rural customers in the county will have reached 15,000, and the area will be operating 850 miles of line.

The approximately square shape of Essex County, the central location of the Town of Essex, and the excellent communication provided by highways radiating from Essex to all parts of the county have strongly suggested cost savings resulting from centralization of the

entire operation for the county at one point. After extensive study, it has been decided to amalgamate Harrow, Kingsville and Essex R.O.A.'s, together with a small remnant of Windsor R.O.A. left after the establishment of Sandwich East and Sandwich West municipal utilities. The new area will be called Essex Area, and will be the first county-wide rural operating area in the Commission's system.

Consideration will be given to the establishment of small commercial offices in two or three of the municipalities on the outer rim of the county. These offices would be maintained to facilitate payment of accounts, but would also serve a general customer relations and sales promotion function. Facilities for service to customers will be provided from these commercial offices as well.

Riverside Plans New Substation

Riverside P.U.C. has completed plans and placed an order for a new substation. It will serve the fast-growing area near an existing station, as well as carry over 90 per cent of the load now carried by the older station, which will be dismantled.

Hydro Expands Northern Service

Ontario Hydro is constructing 26 miles of line to serve the community of Caramat, 35 miles east of Geraldton, Ont. Arthur Chadwell, Geraldton Area Manager, reports the line is scheduled for completion this winter.

Port Elgin Promotes Water Heater Sales

A three-way sales plan to make domestic water heaters available for use in Port Elgin homes has been approved by Port Elgin Hydro Commission.

The first method is outright purchase by the householder for cash. The second is purchase by instalments over a period of two years. Under the third method, the local commission will rent the heater to the customer, but will retain ownership of the equipment.

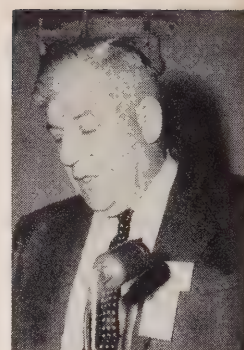
Toronto Township Cuts Hydro Rates

Toronto Township Hydro-Electric Commission has announced a reduction in electrical rates for its customers, as well as a substantial decrease in flat rate water heater monthly charges. The cut in electrical rates will reduce domestic customer revenue by approximately 12 per cent, while commercial and power revenue will be lowered by $7\frac{1}{2}$ and $6\frac{1}{2}$ per cent respectively. In announcing the rate changes recently, Chairman G. D. Pattinson said they were made possible by increased use of electrical appliances in Toronto Township premises, resulting in a higher load factor for the entire distribution system.

Toronto Hydro Employees Receive Resuscitation Medals

Three employees of the Toronto Hydro-Electric System received resuscitation medals at a recent meeting of the Canadian Electrical Association in Quebec City. William Barr and Henry W. Dorey were recognized for saving the life of a man who came in contact with a 4,000-volt line in September, 1958. Mr. Barr risked his life to pull the man free of the live conductor, and Mr. Dorey successfully applied artificial resuscitation.

Ira S. Murphy received a C.E.A. medal for both freeing and reviving a fellow-employee, who accidentally touched a 4,000-volt line in December, 1957.



HONOR CHIEF ENGINEER'S MEMORY

ACTING on the suggestion of Commissioner Bruce Weber, Kitchener P.U.C. will name its new service building in memory of the utility's former Chief Engineer, the late Arthur W. Bromley, who died last November.

Mr. Bromley designed the building, and was chiefly responsible for supervision of the initial phases of construction. Scheduled for completion this spring, the building will house virtually all the facilities required for servicing equipment of the commission's electric and gas departments.

O.M.E.A.—A.M.E.U.

(Continued from page 20)

cheson, and still serves in this responsible capacity.

A.M.E.U.—Past Presidents

1909-1916—P. B. Yates, St. Catharines; 1917-1918—E. V. Buchanan, London; 1919-1920—O. H. Scott, Belleville; 1921-1922—M. J. McHenry, Walkerville (later Ontario Hydro); 1923—A. T. Hicks, Oshawa; 1924—J. E. Phelps, Sarnia; 1925—V. S. McIntyre, Kitchener; 1926—R. H. Starr, Orillia (now Toronto Twp.); 1927—J. J. Heeg, Guelph; 1928—J. G. Archibald, Woodstock; 1929—A. W. J. Stewart, Toronto; 1930—R. L. Dobbin, Peterborough; 1931—J. W. Peart, St. Thomas; 1932—C. E. Schwenger, Toronto; 1933—T. W. Brackenreid, Port Arthur; 1934—W. R. Catton, Brantford; 1935—O. M. Perry, Windsor; 1936—C. A. Walters, Napanee; 1937—H. F. Shearer, Welland; 1938—R. S. Reynolds, Chatham; 1939—G. E. Chase, Bowmanville; 1940—

—A. B. Manson, Stratford; 1941—C. E. Brown, Meaford (now Hamilton); 1942—V. A. McKillop, London; 1943—R. B. Chandler, Port Arthur; 1944-1945—S. W. Canniff, Ottawa; 1946—R. J. Smith, Perth; 1947—J. R. Sullivan, Woodstock; 1948—J. E. Teckoe, Jr., Windsor; 1949—J. C. Keith, Windsor; 1950—R. Butter, Owen Sound; 1951—M. W. Rogers, Carleton Place; 1952—R. H. Martindale, Sudbury; 1953—N. A. Grandfield, Brantford; 1954—A. W. H. Taber, Fort William; 1955—H. A. Howard, Thorold; 1956—E. A. Washburn, Stratford; 1957—G. R. Davis, Kingston.

Secretary-Treasurers

Since the formation of the A.M.E.U., four men have occupied the position of Secretary-Treasurer. The first was the late E. M. Ashworth (mentioned above); the late S. R. A. Clement, W. Roy Harmer (now Manager of Sales Promotion, Ontario Hydro) and the present popular and capable incumbent, W. "Ron" Mathieson, Toronto. ■



H. W. BECK

H. W. BECK

HORACE W. Beck, who, like his uncle, Sir Adam Beck, was associated with Ontario Hydro from its pioneer days, died on February 10, 1959 in Toronto's Wellesley Hospital after a brief illness. He was 65.

Mr. Beck was Hydro's Director of Supply from 1948 until last year, and continued to serve the Commission as a consultant after his retirement.

His career began with summer work in 1910, four years after the Commission was established. Following World War I service in France with the Royal Canadian Horse Artillery, he became a permanent employee of Ontario Hydro's Railway Department in 1919.

Three years later he was transferred to the Purchasing Department. He became assistant Purchasing Agent in 1930, Purchasing Agent in 1947 and Director of Supply a year later.

Born in Montreal, Mr. Beck was educated at Upper Canada College, Toronto, and Royal Military College, Kingston.

He leaves his wife, the former Dorothy Gibbs Drew, sister of Hon. George Drew, Canadian High Commissioner to the United Kingdom, and a daughter, Mrs. A. A. Bolté (Diana).

PRACTISING WHAT HE PREACHES

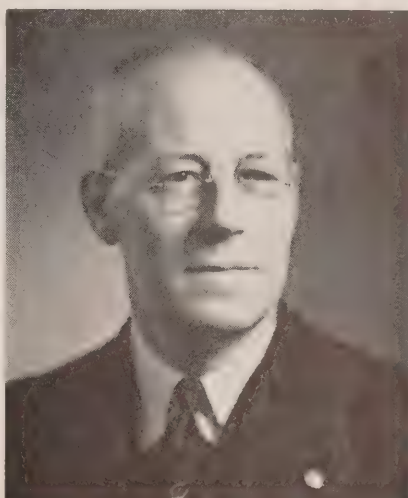
(Leamington Post and News - January 8/59)

JACK ANDERSON, Manager of the Leamington Public Utilities Commission, didn't spend all those years with the Ontario Hydro-Electric Power Commission for nothing. He believes in practising what he preaches.

As a result, he's planning to build the first all-electric home in Leamington. Construction is scheduled to start in April of this year of the dwelling which will be a home for the Andersons and a working demonstration of the slogan: "Live Better Electrically."

The house will feature the following equipment: Complete electric heating, electric 40-gallon water heater, electric built-in cooktop, electric built-in oven, electric washer, electric dryer, ventilating fans, kitchen and bath, modern electric lighting fixtures.

Following completion of construction, plans call for the home to be open for public inspection for a period of about two weeks to let everyone see how Hydro can do the job.



R. M. McKENZIE

R. M. McKenzie, Burlington, Retiring

A lengthy career in electrical utility work ends this month when R. M. McKenzie retires as Chief Electrical Engineer of Burlington P.U.C. Mr. McKenzie was General Manager of the Hydro-Electric Commission of Burlington from 1953 to 1958. Last year a Public Utilities Commission was established and E. A. Washburn was appointed General Manager. Mr. McKenzie was

appointed Chief Engineer of the Hydro Department.

Mr. McKenzie was associated with Ontario Hydro in several responsible capacities for 35 years. From 1947 until 1953 when he retired from Ontario Hydro, he was Manager of the West Central Region with headquarters at Hamilton, Ont.

BUILDING PUBLIC CONFIDENCE

(Continued from page 1)

retailers, service and repair shop staffs, communications systems employees and construction workers to obtain a clear-cut conception of the electrical industry's impact on Canadian employment.

The foregoing facts afford genuine satisfaction to those identified with Ontario's province-wide Hydro enterprise. They are facts which no one should be hesitant in making known to personal friends or utility customers in strengthening public confidence—an essential ingredient of progressive utility operations. ■



**For a
few Cents
a Day...**

live better
ELECTRICALLY
the safe, clean, modern way

It costs so little to enjoy the convenience and efficiency of modern electric appliances. They help you cook your meals, wash your dishes, refrigerate your food, clean your house and wash your clothes . . . all these services and more at a total cost of only a few cents a day. You'll get more out of life when you get the most out of electricity.

(Sample advertisement—mats available to the associated municipal utilities for use in local "Live Better Electrically" campaigns.)

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ONTARIO HYDRO NEWS



L, 1959 — Convention Issue





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ONTARIO HYDRO NEWS

APRIL, 1959

VOL. 46, NO. 4

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COVER PHOTOGRAPHS

As a salute to the 50th annual meeting of the
O.M.E.A.-A.M.E.U. our cover this month compares
delegates' clothing styles of 1959 and those of the
"roaring 20s."

CONVENTION CARICATURES

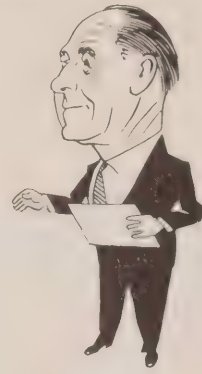
by "Mac" of the Toronto Telegram



E. B. HIGGINS
Swansea



OLIVER SMITH
Midland



ROBERT LEIGH
Huntsville



W. L. WILSON
Tilbury



ERIC HUTCHINSON
Mount Forest



A. F. FERGUSON
London



C. A. VEIGEL
Paris



C. B. CARRUTHERS
Stayner

CHANGING TIMES

"THEY have left us little to live down, but lots to live up to," was the way President Bert Merson described the contribution of officers and members of the Ontario Municipal Electric Association during the past half-century. Addressing delegates at the opening session of the association's 50th annual meeting, Mr. Merson paid tribute to the spirit of co-operation among O.M.E.A., A.M.E.U. and Ontario Hydro representatives in this challenging period.

Just as in baseball, one cannot win today's game on yesterday's home run, so Hydro cannot function in 1959 by the methods of 1909, he continued. Changing times have brought about vast changes in generation, transmission and various other techniques and in the day-to-day operations of electrical utilities.

New challenges confront utilities as new uses and applications of electricity become available.

But change, simply for the sake of change, must be avoided, the speaker warned. Years of careful study and field testing have been applied to all phases of the Hydro operation, and it is only in this way that true progress is possible.

Comparing Ontario Hydro's vast resources as "a family cake" to divide among its members, he warned that if an undue cry "for a

larger slice," by some of the members, results in one group getting more than they are entitled to, then other members of the family must expect to get along on a smaller share.

Mr. Merson explained the necessity of three "poll by mail" votes required in the course of the year's business. The first petitioned Ontario Hydro to increase its grant to the Electric Service League of Ontario to permit accelerated promotional work. This increase was granted. The second supported a resolution to Premier Leslie M. Frost asking for assurance that the proposed Department of Energy would, in no way, change the present status of Ontario Hydro. The Premier accepted the resolution as fully setting out the reasons why there should be no change.

On the third occasion, Mr. Merson, in consultation with other members of the executive and the A.M.E.U., asked for the postponement of labor-management classes until directors could become more conversant with the intent of the classes. This, it was felt, would avoid starting the classes on the wrong foot.

Calling the attention of delegates to the provincial and district constitutions of the O.M.E.A., which

(Continued on page 4)

INCREASED MEMBERSHIP was revealed by O.M.E.A. Secretary-Treasurer D. P. Cliff in presenting his report for 1958. President Bert Merson conducted the opening business session.



Roy Warwick
Blenheim



ONTARIO HYDRO NEWS

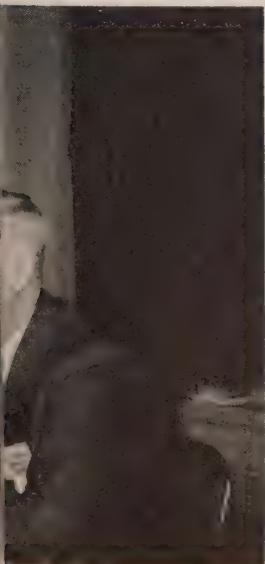


J. H. Cavanagh
Scarborough Township

**Yesterday's home run will not win
tomorrow's game, O.M.E.A. President warns**



DELEGATES throng the floor of the convention hall during the registration period. ▷



make provision for the calling of emergency meetings at any time, he deplored a trend which has sprung up in various places of holding "unofficial meetings." These, he felt, are not in the best interests of the association.

Secretary-Treasurer's Report

"Since the formation of the O.M.E.A., we have never failed to add to the membership," D. P. Cliff, O.M.E.A. secretary-treasurer, told delegates pointing out that the association now has 313 members—an increase of four over last year.

Paying tribute to the efforts of the pioneers and officers of O.M.E.A., Mr. Cliff said that co-operation was the basis on which the province's vast hydro-electric enterprise was built.

"Without it," he continued, "Ontario Hydro would never have come into being. Lack of it in those early days would have caused our slow strangulation and public repudiation. Co-operation has been a tremendous force in enabling us to make the dreams of those visionaries a glorious reality."

Dealing with the resolutions passed

at the 1958 annual meeting of the association, Mr. Cliff reported that action had been taken on all motions. In most cases, the results were very gratifying.

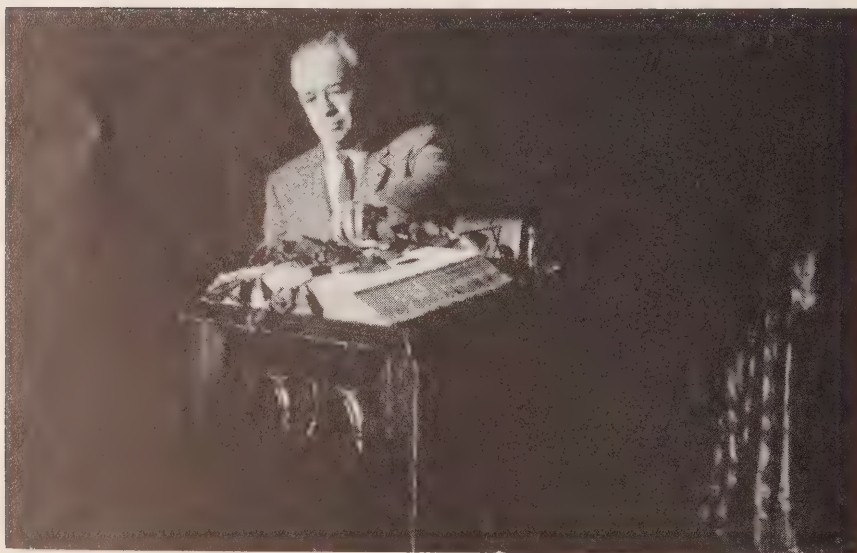
As a result, members were being asked to vote on a more equitable basis of assessment for those members now on low tension distribution. Commenting on a resolution asking for more detailed information on the size of the "Stabilization of Rates and Contingency Reserve Fund," he pointed out that experts agreed to a minimum of \$130,000,000 in this fund to cover all items. At the present time there is a deficit of \$3 million.

He assured delegates that the A.M.E.U. Rates Committee is studying all the proposals on rate changes passed at the last annual meeting. Furthermore, consideration will be given to their inclusion in a revised edition of the Standard Interpretation of Rates.

Other resolutions dealing with the cost of the relocating municipal utility structures to make way for multi-lane highways, cost of Christmas tree decorations, and the destruction of old records have been brought before the appropriate authorities and favorably received. The Federal Income Tax Department is studying a request to allow local commissioners to deduct a third of their annual indemnities in making their income tax returns. The Ontario Department of Municipal Affairs is considering a motion calling for the election of commissioners for four-year terms, with half of the commission being elected each year.

Reflecting the growing membership, O.M.E.A. finances were reported to be in excellent condition by the Finance Committee presented by Roy Warwick, Blenheim. The bank balance increased by some \$1,482.08 over the previous year, while the statement of assets indicated a balance in excess of \$13,000—more than one year's expenses in reserve. Expenses for the past year were \$10,724, Mr. Warwick stated. ■

IN MEMORIAM



IN a dimmed and hushed convention hall, Secretary-Treasurer Cliff lays roses on an open Bible as O.M.E.A. members paid tribute to the memory of colleagues who had died during 1958.

HEADS bowed in silence, O.M.E.A. delegates paid tribute to fellow-members who had died since the last annual meeting. While President Bert Merson read their names, Secretary-Treasurer D. P. Cliff placed a rose on an open Bible.

The ceremony honored the mem-

ory of: C. P. Cashman, York Township, February 27; J. F. Haynes, Colborne, September 5; Angus A. Smith, Mount Forest, September 7; William Poulter, Cottam, September 13; John Brown, Scarborough Township, September 15, and Wright Partington, Merriton, January 26, 1959.

SAFETY AWARDS

ON October 4, 1958, an employee of the Swansea Construction Company, Carmine Spedalieri, was operating a digger on the Dundas Highway west of Toronto. When the boom came in contact with a 4,000-volt line, the operator was rendered unconscious. Fortunately linemen of the Toronto Township Hydro-Electric Commission were in the vicinity, and immediately came to the rescue. Clifford R. Bricker, a 29-year-old member of the line crew, applied artificial respiration for approximately 25 minutes before Spedalieri was able to breathe without assistance.

This was just not an incident calling for a muttered half-embarrassed expression and acceptance of gratitude. Mr. Bricker's noteworthy action in saving a man's life was climaxed recently by the presentation of the President's Medal of the National Safety Council. At the request of the Electrical Utilities Safety Association of Ontario, young Bricker was publicly congratulated by Ontario Hydro's General Manager, A. W. Manby, as a highlight of the concluding luncheon at this year's O.M.E.A.-A.M.E.U. 50th annual meeting. Mr. Manby also presented a similar award to Cletus Vestervelt, an employee of Picton Public Utilities Commission for five years. The presentation formally recognized the utility employee's successful resuscitation of Terry Wannamaker in August last year when the eight-year-old boy was involved in a swimming accident. Rescued from East Lake, near Picton, the youngster was successfully resuscitated after 15 or 20 minutes' artificial respiration by Mr. Vestervelt.

Mr. Manby also welcomed two electrical utility employees into the ranks of The Turtle Club.

Their enrolment indicated that they had avoided serious personal



IN RECOGNITION of their life-saving efforts, Clifford Bricker, Toronto Township (centre) and Cletus Vestervelt, Picton, received Presidents' Medals from the National Safety Council. The presentations were made by Hydro's General Manager, A. W. Manby, during luncheon.



TWO OTHER MUNICIPAL UTILITY EMPLOYEES, W. S. McCord, Toronto Township (centre), and Boyd Balkwill, Orillia, were also welcomed as the newest members of the Turtle Club.

injury or death—while “on the job”—with the invaluable assistance of hard hats. Boyd Balkwill, 38, an employee of the Orillia Water, Light and Power Commission for 13 years, was removing a branch from a tree when the branch suddenly dropped. But Balkwill's safety helmet cushioned the force of the 100-lb. blow and completely protected him from serious injury. W. S. McCord, another employee of the Toronto

Township Hydro Commission, learned about the benefits of wearing his helmet while working at the base of a pole in February last year. A handline was hauling materials to the top of the pole when the grip slipped off, fell some 30 feet and struck the 39-year-old utility crewman on the head. But his hard hat saved him from possible death—or at the very least, a nasty headache. ■



CROSS-SECTION of the convention audience during a joint O.M.E.A.-A.M.E.U. session.

A Success **LOOK**

SYMBOLIZING the close ties between the two associations, this year's 50th annual O.M.E.A. - A.M.E.U. meetings were launched with a joint, A.M.E.U.-sponsored management session. The agenda ranged in scope from pensions to work standards, and was climaxed with a discussion by "A Panel of Prophets on

APPROXIMATELY 1,200 delegates attended the 50th annual meeting this year—one of the heaviest registrations on record



NG BACK AT '58

Space Heating. Details of this discussion period appear elsewhere in this issue.

The effectiveness of the utility office as an asset to management and commissioners was outlined by W. H. Gibbie, Oshawa Public Utilities Commission. His recommendations included the preparation of

regular reports to measure the activity, progress and financial position of the utility.

These reports, he said, should include a financial statement and progress summaries of new business, arrears, collections, operating budget, capital budget, cash budget, and an annual disposition of surplus. The speaker also suggested that some form of annual report be issued, covering all the activities of the system. "Obviously," he said, "management and the commission will be much better informed if the office produces these reports in good form and at regular intervals throughout the year."

The need for good records, accurately maintained and kept up to date, was also stressed by the Oshawa speaker. He described a customer's service application card designed to cut down the red tape sometimes associated with this procedure, a stock card system to simplify inventory balancing, and the minimum personnel records.

The importance of good public relations was also underlined by the speaker. He said the utility's cause is advanced or retarded each time a member of the staff comes in contact with the public. His informative address also included references to accounting procedures, work orders, service and staff training.

Work Standards

More than four years ago, Ontario Hydro commenced studies to determine the feasibility of establishing standard times for carrying out the various types of distribution line work performed by area personnel. The history, progress and future potential of this plan were

outlined by Omer S. Russell, the Commission's director of Management Services.

Mr. Russell emphasized the complexity of the work by illustrating the variations in the size and nature of the areas, but he said the jobs performed by the line crews contained many similar elements or components. He explained that actual stopwatch measurements were taken to determine the amount of work necessary to complete each component. Job standards were derived from these observations after allowance had been made for such factors as individual working speeds, fatigue, personal needs, loading and unloading trucks, cleaning and receiving instructions.

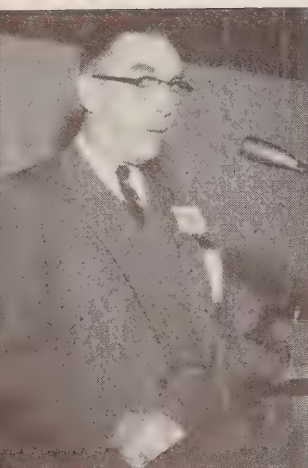
The Area Work Standards plan was introduced in the West Central Region about 2½ years ago, and it has since been applied to all areas in the nine regions. "To date," Mr. Russell continued, "the plan has provided: (1) information for more effective operation of the individual crews and areas; (2) an index of performance; (3) a measure of area management's effectiveness, and (4) a more reliable basis for determining the cost of work done."

He said that the plan is limited, at the present time, to line crews working on the low voltage transmission and distribution systems in the areas. He revealed that plans are being made to extend the plan to include other area activities such as forestry, station maintenance and even clerical work.

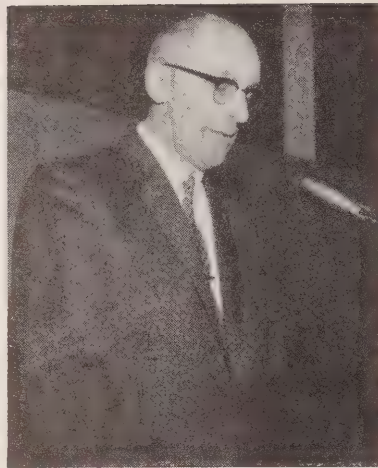
Mr. Russell cautioned that the plan could only provide information. It is up to management to in-

(Continued on page 8)





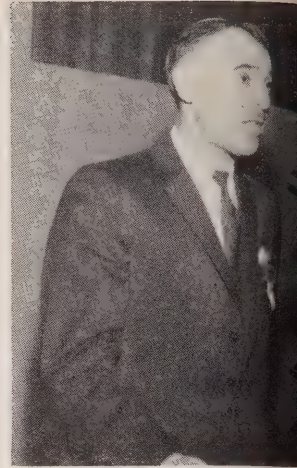
W. J. Wylie
Toronto



W. H. Gibbie
Oshawa



Roy Beith
Toronto



N. A. Grandfield
Brantford

stitute procedures indicated by the results actively and continuously. "Even though it indicates potential places for cost reduction and can be used for cost control and improvement," the speaker concluded, "yet only management can make the changes to achieve such improvements."

Extended Safety Services

Means of extending the benefits of the Electrical Utilities Safety Association to municipalities operating under Schedule II of the Workmen's Compensation Act have been under consideration for some years and Roy Beith, association manager, told the delegates that definite proposals will be forthcoming at the annual meeting in July.

Mr. Beith explained that the question had been brought to the fore by a recent resolution of the A.M.E.U. A subsequent meeting of the E.U.S.A. executive had been held to discuss the matter. One of the problems still to be resolved, he said, is the establishment of a rate that would be satisfactory to the municipalities and win the approval of the Workmen's Compensation Board. He also pointed out that a staff increase will be necessary if some of the larger Schedule II employers are to join the E.U.S.A. This would be unsound unless the new municipalities are prepared to retain the services of the association

for more than one year, Mr. Beith stated.

Employee Relations

Details of the work of the Employee Relations Committee were outlined by N. A. Grandfield, general manager of Brantford P.U.C. Mr. Grandfield reviewed the purpose and contents of a recently-published survey on working conditions and wage rates. He said it dealt with most of the items which normally are considered in collective bargaining. It is intended that management be provided with an accurate means of assessing its own position within the industry. He said that 54 of the 88 utilities reporting in the survey have wage agreements negotiated by collective bargaining.

Referring to the request that office personnel be included in the survey, Mr. Grandfield said that several key classifications common to most utilities already have been established, and it was the hope of the committee that this addition could be completed early in 1959. He stated that the survey manual has been sent to every member municipality with a population of more than 4,000, and he urged those concerned to keep the committee up-to-date on developments.

R. S. Reynolds, manager of Chatham, P.U.C., reporting on the Municipal Hydro-Electric Pension

and Insurance Plan, found "only one weakness—we should all be in it."

The current enrolment of about 7,000 municipal employees represents only 90 per cent coverage under the plan.

Mr. Reynolds, chairman of the A.M.E.U. Pension and Insurance Committee, also noted "what would appear to be a lack of interest by management in some municipalities in respect to what happens to the retired workers."

He strongly advocated additional voluntary contributions by employees and adoption by all municipal commissions of the supplementary plan instituted in 1952 to increase pension benefits.

Two options in the plan were drawn to the session's attention: the joint-survivor clause whereby an employee can designate someone else as well as himself for pension payments during their life, and integration of the Federal Old Age Pension benefit with the municipal plan.

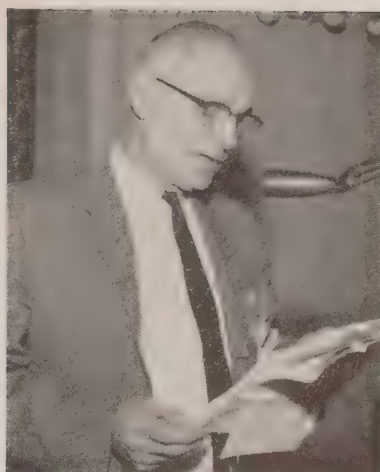
Public Relations

The Public Relations Committee is considering preparation of a manual of "do's and don'ts" to help municipal employees build up customer relations, Chairman W. J. Wylie reported.

"People act in the same way as



O. S. Russell
Ontario Hydro, Toronto



P. R. Locke
St. Thomas

in the time of the Magna Carta," he said. "Public relations is just a modern name for the difference between liking and disliking."

But the ability to create a good public opinion requires instruction as a necessary part of training for more important positions. Methods used by the larger utilities are often not appropriate for smaller ones.

Mr. Wylie, director of consumers service, Toronto Hydro, read a letter from one customer praising frequency changeover methods and other Hydro service.

"It is often very difficult to tell what consumers think of a utility," he remarked. "Sometimes we receive praise, but more often we hear from them when they're peeved."

"Employees may not realize they are doing something that will create a bad attitude unless this is pointed out to them," Mr. Wylie added.

Everyone can practise good public relations by lending a helping hand, giving a little more than is expected of him, and remembering that actions speak louder than words.

JOINT SESSIONS

In his inter-association report, presented before a second joint session of all the delegates, Dr. V. S. Wilson, Etobicoke Township, described some of the background ac-

tivities associated with the 50th annual meeting. He noted that the O.M.E.A. and the A.M.E.U. were among the first organizations to make use of the greatly expanded convention facilities at the Royal York Hotel. Accommodation is no longer a problem, Dr. Wilson pointed out. He also referred to the special exhibits, speakers and ladies' program as factors contributing to the record advance registration. The 1960 convention will be held March 14, 15 and 16, he announced.

Pensions and Insurance

Increased participation in the Municipal Hydro-Electric Pension and Insurance Plan was reported by O.M.E.A. Committee Chairman, P. R. Locke, St. Thomas. He said that Scarborough Township, Whitby and Bronte had joined the plan during 1958 and that Burlington had added 32 waterworks employees to their representation.

Mr. Locke's report contained the following summary of operations: Number of municipalities—154; Number of municipalities included in Supplementary Plan—84; Number of employees—6,962; Amount of life insurance benefits in force—\$33,658,440; Number of employees at present drawing pension—544; Amount of monthly pensions being paid—\$36,834; Number of voluntary contributors (as of May 1, 1958)—592; Amount of employees'

monthly extra contributions (approx.)—\$13,790; Number of death claims to December 31, 1958—895; Amount of life insurance paid to December 31, 1958—\$2,956,540; Amount of employees' contributions refunded—\$927,393, and Amount of employees' extra contributions refunded—\$144,803.

Mr. Locke also announced that an arrangement had been worked out whereby employees might transfer from Ontario Hydro to a municipal commission, or vice-versa, while retaining their pension credits. He said the terms of the agreement are now being submitted to the member municipalities, describing it as "one more step toward making the plan one of the most flexible and progressive available."

Mr. Locke also drew attention to the problem of providing protection for those who, because of age or other reasons, find themselves at the time of retirement with inadequate income. He hoped for an opportunity to discuss the problem with Ontario Hydro.

Electric Service League

Important organizational changes designed to increase the scope and effectiveness of the Electric Service League of Ontario were contained in the report presented by Past President W. J. Wylie. He cited increased activities in the building field, competition from natural gas, the fast-developing Medallion Home Program, and the interest aroused by the "Live Better Electrically" campaign as factors underlying the need for reorganization.

"Experience has taught us," Mr. Wylie said, "that the League can be made much more effective if it becomes the agency wherein all segments of the industry can meet upon common ground to promote and co-ordinate a common interest." He said it was with this purpose in mind that the League had submitted a brief to Ontario Hydro, the O.M.E.A., the A.M.E.U., and other electrical associations, suggesting a definite course of action.

The brief proposed the division of



NEW MEMBERS of the Electric Service League of Ontario executive watch as Immediate Past President W. J. Wylie, Toronto Hydro (second from left), congratulates President Eric Hall, Toronto. Looking on are Ontario Hydro's Director of Consumer Service, I. K. Sitzler,

1st vice-president (extreme left); Gordon Harris, Toronto, second vice-president and League Manager Harry Foy. The new executive officers recently announced the election of Ontario Hydro Chairman James S. Duncan as the honorary president of the League for 1959.

the province into seven geographical areas and the appointment of one or more League representatives to each area. These representatives would be responsible for the organization and guidance of League chapters or branches within their territories. It was recommended that about 20 such chapters should be formed immediately in the larger centres and that these should be followed by 25 others as the plan progressed. Membership in the chapters will be open to those who are actively interested in promoting the "Live Better Electrically" campaign.

"The purpose of the chapters," Mr. Wylie explained, "is to organize and promote the use of electricity to the benefit of all segments of the industry and particularly to the general public." He suggested that the success of each chapter will depend, to a large extent, on the support and co-operation of the local utility commissions.

The speaker estimated that the League will require an additional \$74,000 annually in order to implement the full program. Already \$44,000 of this amount has been assured for 1959, making it possible to establish three areas with a resi-

dent League representative in each.

Mr. Wylie prefaced his remarks with an account of the League's progress in promoting adequate wiring. He revealed that 16,193 Red Seal certifications had been issued in 1958, compared with 9,668 in the preceding year. He also noted that 83 Bronze and Gold Medallion homes were completed or under construction in widely-separated parts of the province. During the course of the year, Mr. Wylie pointed out, the League's field staff travelled a total of 40,492 miles and made 14,014 calls.

A.M.E.U. Review

In summarizing the year's progress, A.M.E.U. President J. A. Williamson briefly described the work of the various committees set up under the four main sections—Finance and Office Administration, General Administration, Engineering, and Association Operations. Among the new committees set up during the year, he mentioned the Load Promotion Committee, with the promotion of space heating and water heating as a primary objective; the Heating Applications Committee, which will deal with tech-

nical problems associated with all types of heating loads; and the Metering and Service Equipment Committee, representing the amalgamation of the Metermen's Council and the Metering Committee.

Dealing with membership, Mr. Williamson reported that 271 municipalities are now affiliated with the A.M.E.U.—the greatest number of member municipalities in the history of the association. He noted that there are only two non-member municipalities whose annual power purchases exceed \$100,000. Of those purchasing more than \$50,000 worth of power annually, only nine are not members. Six of these are operated by Ontario Hydro and have no staff.

Mr. Williamson also commented on the pleasant relationship the A.M.E.U. continued to enjoy with the O.M.E.A. and with the commissioners and staff of Ontario Hydro. He said "It is in the co-operation of the triumvirate of the O.M.E.A. and the A.M.E.U. representing the municipalities, and Ontario Hydro, all working together for the municipalities, that Hydro has become great and in the future will remain great."

WI' BESOM AND STANE

FROM start to finish it was an event-filled program. We're talking about this year's O.M.E.A.-A.M.E.U. meeting, of course.

Early-arriving delegates, particularly the devotees of the "roarin' game," were delighted to find a curling competition at the Tam O'Shanter Golf and Country Club as the first item on the agenda.

Thus before settling down to the more serious side of the convention, 40 delegates journeyed by bus to compete in an eight-end bonspiel.

The winning rink was: J. W. Davidson, R. E. Spence and O. M. Kennedy, of Deep River, with E. J. Hawthorne, Nipigon, as the fourth member.

A special curling trophy, donated by H. W. Little, Brockville, and cigarette lighters were presented to the champions. Souvenir Tam O'Shanter Curling Club spoons were presented to the runners-up and to the two ladies who played. Mrs. J. A. Williamson and Mrs. Ray Pfaff received club pins. The bonspiel will be an annual event and the champions were warned to bring the trophy back with them next year. ■



SKIP ROSS STRIKE and D. C. Brazier (left) are making a determined effort to "sweep one into the house" (above), but judging by Harry Foy's happy expression, he's confident they'll fail. In the lower photograph, three Atikokan players, Marvin Kelly, Reeve J. A. Johnston and W. A. Ferguson "bring home the bacon" under the watchful eye of H. W. Little, Brockville.



STEADFAST PARTNER

Relationship between Hydro and the Province of Ontario will remain undisturbed, Chairman Duncan assures O.M.E.A. - A.M.E.U. delegates

THE TRADITIONAL relationship between Ontario Hydro and the Ontario Government will remain undisturbed, Ontario Hydro Chairman James S. Duncan told delegates at this year's 50th annual O.M.E.A.-A.M.E.U. meeting in Toronto.

Speaking at a luncheon gathering of some 1,000 municipal Hydro representatives, Mr. Duncan referred to proposed provincial legislation that would create a new department of energy.

"As you know, the duties of this new department have not yet been clearly defined. But you—and we—have been assured by Premier Leslie Frost and his colleagues that the traditional relationship between Hydro and the Province will remain unchanged and undisturbed," Mr. Duncan said.

"I consider this vital and important. Because of these assurances, I look to the future without concern."

The Hydro Chairman congratulated the O.M.E.A. and the A.M.E.U. on their golden jubilee gathering. Referring to the great contribution of both organizations to the continuing success of the Hydro enterprise, Mr. Duncan outlined briefly his concept of the respective responsibilities of Ontario Hydro, the municipal utilities, the Ontario Government and the public.

"Ontario Hydro is an entity delicately poised between the government, the municipalities and the

consuming public. It has well defined responsibilities to each of these three."

Hydro, the Chairman continued, differs from any other provincial commission in the province as it does not belong to the Ontario Government nor is it a department of that government.

"It was founded by the municipalities, it operates in partnership with them and its first responsibility is to them. The municipalities occupy a role which is somewhat similar to that of the shareholder in a corporation. We are their trustees."

Government Obligation

The O.M.E.A. is represented on the Commission, Mr. Duncan pointed out, by three Commissioners, First Vice-Chairman W. Ross Strike, Lt.-Col. A. A. Kennedy and D. P. Cliff, all of whom have been senior executive officers of the municipal organization. But while Hydro's first responsibility is to the municipalities, the Commission is fully conscious of its obligations to the provincial government, Mr. Duncan emphasized.

"Owing to the ramifications of our organization and the impact which it has on the lives of nearly all our citizens, the government and all members of the Legislative Assembly are intimately affected by the attitudes and the actions taken by Ontario Hydro... they are deeply concerned with the manner

in which the Commission approaches its problems and carries out its duties."

Although the provincial government does not interfere in Hydro affairs, the Ontario Hydro Chairman and Commissioners are appointed by the government and, therefore, are responsible to the Province for sound and efficient management, Mr. Duncan said. To reduce the cost of financing, the Province of Ontario guarantees the borrowings of Ontario Hydro—thus involving the credit of the Province.

Furthermore, the Commission acts as the Government's trustee for the Northern Ontario Properties.

Responsible to Public

And finally, Hydro is also responsible to the public, Mr. Duncan told the convention.

"Ontario Hydro endeavors at all times to carry out its functions with fairness to all parties concerned. This is less difficult than might appear at first glance because, in essence, the government, the Legislature, the public and ourselves all have a common interest—namely, the supply of electric power at the lowest cost consistent with adequate service and financial security."

One of the greatest factors in attaining this objective, Mr. Duncan stated, is the counsel and constant contact with the members of the O.M.E.A. and the A.M.E.U., whom he described as "our greatest source of strength... men like J. A. Wil-

HIP

ONTARIO HYDRO CHAIRMAN James S. Duncan addressing O.M.E.A.-A.M.E.U. delegates.



Williamson and Bert Merson, experienced men all striving towards the same goal . . ."

"Never is an important decision taken without seeking the counsel of your O.M.E.A. representatives. No new policy is embarked upon without exhaustive discussions with your representatives on the Commission—Ross Strike, Mr. Cliff and Col. Kennedy."

Mr. Duncan said he could not recall a single instance when an important matter under consideration by the Commission had not been carried unanimously.

"We welcome constructive criticism from any of you in this room today . . . tell us your problems. You in the field are much closer to them than we."

Unfailing Support

During the course of his remarks, Mr. Duncan paid tribute to the unfailing support and loyalty of the two associations.

"I have nothing but admiration for your organizations. We are partners in the development of Hydro; a development which has been a source of immense satisfaction to those intimately concerned with it; a development which has given us a feeling of fulfillment; and a development which has brought prosperity and a better way of life to the people of Ontario."

Moreover, Mr. Duncan continued, Hydro and the municipalities are making an important contribution in the containment of inflation in the province.

"So long as this spirit of dedication and co-operation continues, Ontario Hydro will continue to progress and the people of this province can look forward with assurance to the future when, to an ever-increasing degree, electricity will replace the labor of man for the betterment of all," he concluded.

Mr. Duncan was introduced to the luncheon audience by G. R.

Davis, past president of the A.M.E.U. and general manager of Kingston Public Utilities Commission.

Mr. Davis said that "the Commission has been fortunate in acquiring the right man at the right time to serve as Chairman ever since its inception.

"One characteristic they all had in common was a devotion to their job. Today, the Commission is again finding great qualities of leadership in its Chairman, who has brought to the position the same organizational talents, insight and plain hard work that earned him prestige in the world's financial circles." Mr. Davis said.

Gordon H. Fuller, immediate past president of the O.M.E.A. and chairman of Windsor Public Utilities Commission, thanked Mr. Duncan for "an inspiring address."

"The ovation is in answer to a job well done," Mr. Fuller said.

by Peter Maitland.



A TRADITION MA

..... IN

THE ONTARIO HYDRO Chairman's "annual" convention report to O.M.E.A. and A.M.E.U. members was presented in a different form at this year's meeting. A 17-page written report, together with a covering letter from Chairman James S. Duncan, was mailed to the associated municipal utilities. In addition, copies were available on the convention floor.

Chairman James S. Duncan explained the new approach this way:

"We have broken with tradition this year. My predecessors have always given you an oral report . . . at this convention. This year we have put the report down on paper. By this procedure you will be able to examine it in the leisure and comfort of your home."

Mr. Duncan told delegates that he hoped the new procedure would meet with their approval.

"But if you wish to go back to the old system we will be delighted to do it that way."

Highlights of the report are presented in capsule form on this and succeeding pages:

SUMMARY — Total generating resources and peak power require-

ments grew to record levels, more customers were served than in any other year, and the Commission's financial position continued to be on an extremely sound basis—a condition reflected by the ready acceptance of its debentures on the Canadian and United States markets.

RESOURCES AND DEMANDS —Ontario Hydro's total resources, including purchased power, reached a record level of 5,761,100 kilowatts in December, 1958, an increase of 19 per cent over the previous year. These resources were sufficient to provide a reserve of 12 per cent.

The electrical demands of municipal systems showed a striking resurgence during the closing months of the year. The growth rate, which averaged about five per cent in the first 10 months, climbed to 7½ per cent in November and nearly 11 per cent in December. Most of this additional demand appears related to the rapid rate of housing completions during the second half of the year.

In December, demands upon all systems advanced to a record 5,139,000 kilowatts—an increase of 7.4 per cent over the previous year. This compares with an increase in December, 1957 of six per cent over December, 1956.

An encouraging increase also took place in the use of electric energy in the province as a whole, consumption being 4.3 per cent higher than last year. This compares with a growth of consumption in the United States of only 2.2 per cent.

By the end of the year, 1,733,000 customers were served directly or through the municipal utilities, an increase of 59,500.

CONSTRUCTION—Ontario Hydro's capital construction program continued at a rapid pace. A total of 800,000 kilowatts of new generating capacity was brought into service, together with impressive increases in transmission, transformation and associated facilities.

NUCLEAR DEVELOPMENT PROGRAM—Construction was re-

sumed on the Nuclear Demonstration plant (NPD-2) in August after a suspension of 16 months to incorporate design changes in the reactor. Despite the delay, the plant will be in service by 1961 as engineering of the conventional portions of the redesigned station, for which Ontario Hydro is responsible, is well in hand, and all the major equipment has been purchased. Hydro's partners in the project, Atomic Energy of Canada Limited and the Canadian General Electric Company Limited, report good progress on their share of the work.

Early in 1958 AECL formed a new Nuclear Power Plant Division in Toronto. This new division, with the active co-operation and participation of Ontario Hydro, is proceeding with the development of a design for a full-scale nuclear power station. It is hoped that the first large-scale nuclear-electric station will be generating electricity in Southern Ontario not later than 1965, and preferably earlier.

FINANCES AND RESERVES—The growth of Ontario Hydro can be gauged to some extent by total assets, which at the end of the year were in excess of \$2,400,000,000, compared with \$2,255,000,000 at December 31, 1957. The long-term debt at December 31, 1958 was \$1,691,000,000, compared with \$1,573,000,000 at December 31, 1957.

General economic conditions were reflected in the Commission's total gross revenue of approximately \$206,800,000 during 1958, compared with \$200,800,000 during 1957 — an increase of only three per cent. Gross revenues in 1957 were in excess of 1956 revenues by 7.8 per cent.

With the exception of the last two months of the year, demands for power and energy throughout most of the province were not up to expectations during 1958. In certain areas, power demands were affected for extensive periods by the closing of industrial plants through strike action. Another factor enter-

(Continued on page 16)

ORK HOTEL'S new Canadian Room was capacity during Mr. Duncan's address.

TAINED
EW FORM

ing into the low rate of increase in gross revenue for 1958 compared with 1957 was the reduction in sales of surplus energy, due in part to the water situation in 1958 which was somewhat less favorable than in the previous year.

Although appropriations for some of the reserves were smaller in 1958 than in 1957, costs of providing services during 1958 were up. Consequently, the refund to the municipal cost-contract customers in the Southern Ontario System is less than for 1957.

Net refunds amounted to \$2,828,164 in 1958. All but nine of the 327 cost-contract municipal utilities in the Southern Ontario System will share in the refund. In the Northern Ontario Properties, net refunds amounted to \$38,868, after withdrawing \$1.00 per kilowatt from the stabilization of rates and contingencies reserve. Six cost-contract municipalities will share in this refund.

The average cost of power to Southern Ontario System cost municipalities has gone up only slightly, from \$36.85 per kilowatt in 1957 to \$37.20 per kilowatt in 1958, an increase of less than one per cent. In the Northern Ontario Properties the average cost to cost-contract municipalities was \$32.55 per kilowatt compared with \$31.27 per kilowatt in 1957, an increase of 4 per cent.

There will be no general increase in the wholesale cost of power to municipalities during 1959.

FREQUENCY STANDARDIZATION—The conversion of 25-cycle areas was 98 per cent complete by the end of 1958, and will be virtually finished by mid-summer of this year. The one-millionth customer was standardized in November, and by the end of the year, 25-cycle appliances converted to 60 cycles numbered some 6,800,000. It is now expected that the program will be completed at a cost of \$360,000,000, which is \$15,000,000 less than esti-

(Continued on page 31)

ON THE FIRING LINE

Ontario Hydro Chairman urges every Hydro employee be

MUNICIPAL UTILITY representatives have countless opportunities for direct daily contacts with thousands of Hydro customers throughout the province. Thus they are in the most advantageous position to effectively meet competition from other sources of energy, such as natural gas.

Discussing the question of competition during his address at the recent O.M.E.A.-A.M.E.U. annual meetings, Chairman James S. Duncan promised strong leadership from the Commission's new Sales Promotion organization.

"But, no matter how good these men (sales promotion representatives) are, the battle will be won by the municipalities and not at Head Office. You are on the firing line . . . everyone must be a salesman of electricity," he stated.

While the dynamic economy of Ontario will undoubtedly require additional sources of energy, municipal electrical utilities must take effective steps to promote the sale of electricity—particularly during off-peak periods—to safeguard their heavy investment of public funds in distribution facilities.

Mr. Duncan said merchandising and service are of predominant importance in meeting competition.

"Nothing sells a product like a satisfied customer. We must make sure that our customers are happy."

Urging that everyone associated with the Hydro enterprise become an ardent promoter of electricity, Mr. Duncan told delegates they should not overlook the great sales potential of Hydro employees.

Tremendous Sales Force

"Together we have some 23,000 people working for us," Mr. Duncan explained. "What a tremendous sales force that could be!"

Mr. Duncan pointed out that a United States electrical utility, Detroit Edison Company, devotes as much time selling electricity to its employees and making them promotionally minded as to its customers.

Continuing, the Hydro Chairman outlined, in broad terms, the possible effects of competition from natural gas on Ontario Hydro and the municipal utilities. An intensive study of the situation, he said, had revealed three important facts:



FOUR KEY FIGURES at the luncheon were (left to right): A.M.E.U. President J. A. Williamson, Mr. Duncan, G. R. Davis, Kingston, who introduced the speaker, and Gordon H. Fuller, Windsor.

LINE

man of electricity

1. Other fuels, notably coal, will suffer most from this new source of energy.

2. Competition will not affect Hydro's peak loads to any substantial degree (by 1970 it could have the effect of retarding growth by about 300,000 kilowatts.)

3. Competition could have serious effects on off-peak loads.

Thus, if competition is not met, Hydro and the municipalities will be in the position of maintaining capital expenditures to meet peak requirements, at the same time suffering a loss of revenue from the decline in sales of off-peak energy.

Electric Heating

Turning to the promotion and development of new uses for electricity, he said "one of the greatest steps forward the industry will take in the future—maybe the greatest ever—is in the field of electric heating."

After quoting what he described as "conservative" figures on installations of electric home heating systems in the United States, Mr. Duncan said that approximately 40 per cent of the new homes built in the United States by 1980 will be heated by electricity.

"Some people say electric heating is more expensive—of course it is, but not very much more. All advances cost more: the electric blender is more expensive than a bowl and spoon; an electric washing machine is more expensive than a tub and scrub board—but people buy these things," Mr. Duncan said.

"Electric heating is coming... let us be sure we know all the facts—that we are ready and equipped to deal with it." ■



THIS STEAM-OPERATED HAMMER is driving piles 45 to 50 feet into the frozen ground for the foundations of the Thunder Bay Generating Station.

LOOKING AHEAD

NATURAL gas may be used to generate electricity at Ontario Hydro's new Thunder Bay (thermal-electric) Generating Station at Fort William if it becomes available in sufficient quantity and at a price competitive with coal.

Hydro Chairman James S. Duncan told O.M.E.A.-A.M.E.U. delegates at their recent annual meeting that the Thunder Bay plant has been designed so that it can be adapted to burn either natural gas or coal. The plant is scheduled for service in 1961 with an initial capacity of 100,000 kilowatts.

"Doubtless similar arrangements will be made at the Lakeview station," Mr. Duncan said.

(Hydro's Lakeview thermal plant, being built west of Toronto, is designed for a capacity of 1,800,000 kilowatts by the mid-60s. Two 300,000-kilowatt units, presently under construction, are scheduled for operation in 1961 and 1962.)

Mr. Duncan said Ontario Hydro welcomes the arrival of natural gas in the province, but at the present time it is not available in sufficient quantity or at a price which is competitive with coal as a fuel for the Commission's thermal-electric stations.

BE IT RESOLVED

O.M.E.A. debates show association's old-time vigor has not diminished

IT MAY have reached the half-century mark, but the Ontario Municipal Electric Association is just as vigorous today as it was when its charter members were spearheading the campaign to promote municipal ownership of the province's power resources.

Never was this fact more clearly demonstrated than at the recent 50th annual meeting of the association as members got down to the serious (and sometimes heated) debates on the resolutions presented by Dr. V. S. Wilson, executive vice-president and chairman of the Resolutions Committee.

The continuing enthusiasm for the principles on which the Hydro enterprise was founded was evident from the moment that Dr. Wilson stepped to the rostrum. There were those in the audience, of course, who speculated that the eloquent flights of oratory were generated by the Irish spirit that abounded, in keeping with the concurrent observance of St. Patrick's Day. But all were unanimous in the opinion that it was one of the most refreshing sessions in several years.

Albeit refreshing, the flow of rhetoric required the combined talents of both Dr. Wilson and President Bert Merson in resolving



JUDGING by the intent expressions of these delegates, the discussions on the resolutions presented during this year's annual O.M.E.A. meeting were of vital concern to municipal utilities.

clarity of debate and intent—and most important, orderly voting sequence—as amendments to amendments poured in from the floor.

Claiming the limelight was the broad topic of frequency standardization. Four resolutions dealing with this subject came under discussion, and, at times, produced a fireworks display of particular brilliance. Three of the motions, in essence, expressed opposition to Ontario Hydro's method of recovering the costs of the changeover program. Specific reference was made to the assessment of \$5 a kilowatt on the annual demand (including future load growth) of each former 25-cycle municipal system in South-

ern Ontario until approximately 1973.

The fourth resolution from the Resolutions Committee requested the Commission to "engage Clarkson, Gordon and Company to reassess their original financing recommendations with a view to devising the most equitable methods of retiring the outstanding debt."

During the lengthy debate on the topic, it became clear that: (1) Most municipalities which had operated on 60-cycle supply before conversion was undertaken wanted no part of the cost of the program placed on them, and (2) many of the converted areas felt that the costs should be apportioned over the



△

JUST BEFORE THE BATTLE! Members of the Resolutions Committee (left to right): Lt.-Col. A. A. Kennedy, Owen Sound; C. R. Buss, Thorold; Roy Warwick, Blenheim; Gordon Fuller, Windsor; H. M. Scheifele, Waterloo; President Bert Merson, Committee Chairman Dr. V. S. Wilson, Etobicoke Township; Secretary-treasurer D. P. Cliff, Dundas, with William Rattray in the foreground, consider the motions before presentation to the delegates.



Dr. V. S. Wilson
Etobicoke Township



President Bert Merson
Toronto

entire province since Ontario, as a whole, had benefited.

Opinions Resolved

An alternative resolution from the floor resolved the conflicting views. As finally amended, the approved motion requested Ontario Hydro to engage the services of Clarkson, Gordon & Co. to initiate studies to determine whether the actual financing and apportionment of conversion costs have placed an unfair burden on any municipality. If such a condition is found to exist, those conducting the study should recommend changes to correct the situation.

A fifth resolution calling for the presentation of total frequency

standardization costs and a breakdown of each municipality's costs within three months of the completion of the frequency standardization program was passed unanimously.

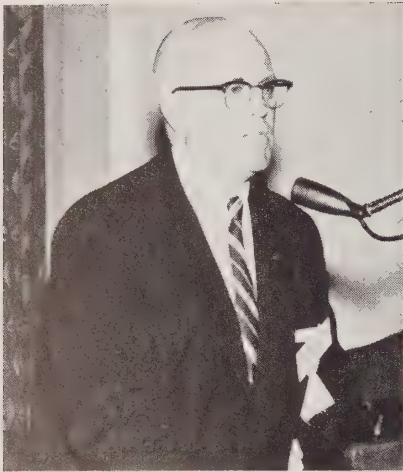
Smaller communities, which have to rely on low tension transmission facilities because of their location, thereby increasing power costs, displayed keen interest in a resolution calling on Ontario Hydro to make use of the interest now accumulating in the Maximum Power Cost Fund, effective January 1, 1959. The resolution also asked for an additional levy of five cents a kilowatt on all municipal load in Southern Ontario, to allow cost assistance to

the municipalities concerned. The resolution called for the program to be undertaken for a period of three years at which time it will be reviewed by the O.M.E.A.

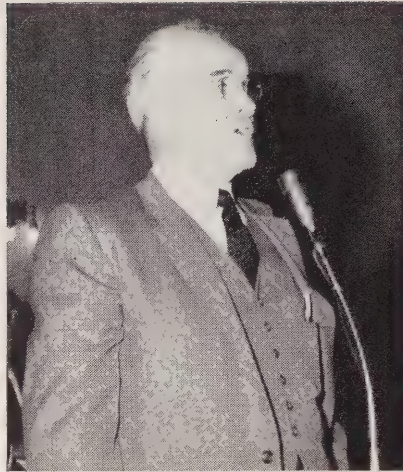
A resolution from O.M.E.A. District 5, which promised to cause a good deal of discussion, was withdrawn due to the limited time which could be allowed. The motion requested Ontario Hydro to return to the principle of supplying power at cost.

Rate Revisions

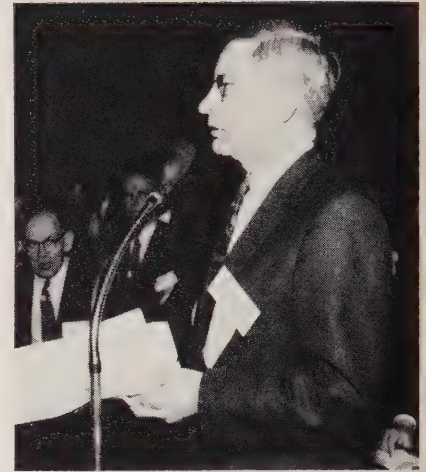
Almost in direct opposition to the District 5 resolution was one from Sarnia, which recommended the
(Continued on page 20)



Gordon H. Fuller
Windsor



Dr. Robert Hay
Kingston



Reeve A. M. Campbell
Scarborough Township

gradual removal of all cost differentials across the province. As amended, the resolution asked Ontario Hydro to consider the revision of its whole rate structure "with special emphasis being given to the elimination or modification of all service charges such as "diversity in power consumption," "peak load," "load factor," and "power factor." As a preliminary step to such a request, the delegates agreed to ask the Rates Committee of the A.M.E.U. to study the problem and report to the next annual meeting of the O.M.E.A. following completion of the report.

A motion from O.M.E.A. District 8 asking Ontario Hydro to establish a fund from which local or municipal commissions could borrow at reduced rates of interest was turned down by the delegates. A similar fate was accorded a resolution from the A.M.E.U., which sought a change in the Bankruptcy and the Bulk Sales Acts to give public utilities a preferred status in the collection of outstanding bills.

Delegates also failed to concur with a motion that asked changes in the Power Commission Act. The proposed revisions would allow municipal electrical utilities to collect and enforce accounts on behalf of other municipal systems by all the legal means laid down in the Act.

A resolution from O.M.E.A. District 4 requesting "the provincial as-



F. R. Cavers
St. Catharines



C. R. Buss
Thorold

sociation to take effective action to ensure that Hydro consumers be assured continuous service" met defeat when put to the vote. Moving forward with the heavy agenda, delegates indicated their favor of resolutions dealing with increased municipal support in promoting electric home heating, the co-operative "Live Better Electrically" program and sponsorship of youth education projects. After a brief discussion period, O.M.E.A. members also responded favorably to a Toronto Township Hydro-Electric Commission resolution recommending that Ontario Hydro take immediate steps to appoint "a public

relations and advertising representative for each of its nine regional offices, so that he may be readily available to the municipalities."

Local Publicity

Delegates gave their assent to another resolution submitted by District 4 asking that each local commission be responsible for giving the publicity they deemed advisable to adjustments of the interim power costs to actual costs received from Ontario Hydro.

J. A. Blay, Ontario Hydro's director of information, his staff, and W. R. Mathieson, secretary-treasurer of the A.M.E.U., were com-



Reeve H. O. Waffle
Etobicoke Township



John T. Barnes
Sarnia

mended "for their untiring and praiseworthy assistance in the promotion and conducting of this convention in a manner worthy of our anniversary meeting."

Appreciation was expressed to the editor of *Ontario Hydro News*, the writers and photographers "for accurate and complete coverage of O.M.E.A. meetings throughout the year." An approved vote of thanks and appreciation to the management and staff of the Royal York Hotel, to the press and to the members of the Convention Committee concluded the resolutions debate and the successful 1959 annual meeting. ■

APRIL, 1959

CONVENTION CARICATURES



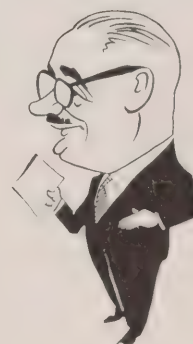
JOHN LIGHTBODY
Lindsay



TOM HONAN
New Toronto



ARTHUR NOLAND
Mildmay



W. A. FERGUSON
Atikokan Township



W. A. EDWARDS
Mimico

PROPOSE NATIONAL PUBLIC UTILITY ASSOCIATION





A.M.E.U. President J. A. Williamson
Niagara Falls



Harry Hyde
Toronto

A.M.E.U. OFFICERS DEPLORE LACK OF VOTE IN C.E.A. AFFAIRS

FORMATION of a national group of publicly-owned utilities with interests similar to those of the A.M.E.U. was proposed by President J. A. Williamson at this year's annual meeting.

In his opening presidential address to the delegates, Mr. Williamson reported that the A.M.E.U., for the past two years, has been attempting to "cultivate a close liaison with the Canadian Electrical Association."

Approval of an amendment to the C.E.A. constitution, during the past year, gave membership to the provincial commission but did not extend membership to local utilities.

Both Mr. Williamson and Vice-President Harry Hyde, Toronto, pointed out that while Ontario Hydro is now a voting member of the C.E.A., this does not entitle the municipal electrical utilities to a direct voice in the association's affairs. On the other hand, privately-owned member utilities in other provinces have individual voting privileges.

In relation to the C.E.A., Mr. Hyde compared the position of the publicly-owned municipal utilities of the Province to "participation without representation." Publicly-owned utilities are making important contributions to Canada's electrical industry, and thus should have voting status in the Canadian association, he asserted.

Mr. Hyde expressed hope for an eventual improvement in relations with the C.E.A.

The retiring A.M.E.U. President also pointed out that large municipal organizations in other parts of

Canada have not been admitted as voting members of the C.E.A.

"Thus it would seem desirable that an effort should be made to form a national group of publicly-owned utilities, which have interests similar to those of the A.M.E.U."

Mr. Williamson also noted a "serious lack" of reasonable representation from commercial associate (engineering staff) members at A.M.E.U. technical sessions and meetings.

Mr. Williamson reported that "during this year, a much greater degree of co-operation with Ontario Hydro has been achieved, and we have had a great deal of technical assistance from them in the form of manpower to carry out tasks assigned by our committees. This arrangement was cheerfully entered into, and is proving beneficial to both Ontario Hydro and to the A.M.E.U. committees, and thus, ultimately, to the municipalities."

Expansion Ahead

He foresaw greater responsibilities for the association with the "tremendous amount of standardization and investigation in all phases of municipal utility procedures," which will accompany expansion in the next 50 years.

This will constitute a major function of the A.M.E.U., since there is no authoritative central body to establish and enforce standard procedures.

"Let us hope that we never do have such a body, because it would not be good for Hydro," Mr. Williamson said.

"Should such a body come into

Continued on Page 24)



M. K. Rukavina
Kapuskasing



C. E. Kirkby
Woodstock



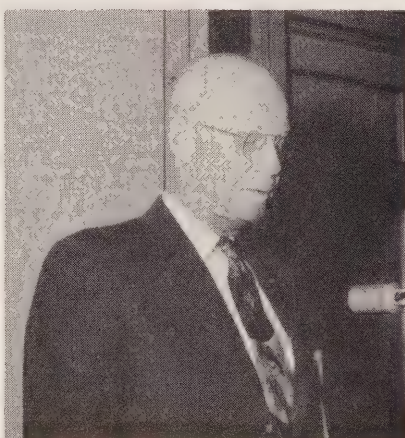
F. G. York
Ottawa



Robert Butter
Owen Sound



Rudy Senyshen
Kitchener



E. J. Woelfle
Toronto



J. W. Hammond
Hamilton

existence, it would rapidly mean the deterioration of the management and engineering staffs of the local utilities. These people would lose all authority, all initiative, and all the local functions would merely be a matter of repetitive administration. This, inevitably, would mean that the local commissions would lose their effectiveness and their autonomy. This must not happen."

Strategic Locations

Mr. Williamson told the meeting that new thermal-electric plants being built in strategic locations throughout Ontario should ensure that "we will forever be free of the bogey of power shortage."

"The streamlined operations of the Commission's Generation, Engineering and Construction Departments should be able to copy handily and readily with load growth on a year-to-year basis," he said.

The necessity of providing A.M.-E.U. information to the regional associations and to the municipal utilities was stressed repeatedly at the meeting—by Mr. Williamson, Mr. Hyde, Association Secretary Ron Mathieson, and President-elect Ray Pfaff.

Mr. Mathieson also proposed this "unwritten constitution" for the A.M.E.U.:

1. As utility people, we promise to promote friendly business relations with each other.
2. As an association, we will provide a committee or section whereby problems effectively, as a whole, may be readily discussed, and to co-operate as a group to further the interests of Hydro by all lawful means which are not motivated by party politics or selfishness.
3. As an association, we will stimulate the growth of Hydro in Ontario by developing a wider market for the use of electricity.
4. We will maintain a high standard of service to our customers.
5. We will continue to advertise Hydro and its specific advantages.
6. We will collect and disseminate information on pertinent matters for the purposes of reducing costs, improving service, eliminating waste, or duplicating efforts.

7. As management, we will endeavor to maintain for ourselves and our staff good working conditions at good salaries commensurate with our responsibility to our customers.
 8. As managers and as an association we will keep our commissioners fully informed and maintain the harmony which we require to keep Hydro democratic in Ontario.
- Reports of A.M.E.U. regional associations were presented by:
- J. H. Page, Trenton, Eastern; Robert Butter, Owen Sound, Georgian Bay; L. E. Richardson, Merriton, Niagara; M. K. Rukavina, Kapuskasing, Northeastern; E. J. Woelfle, Toronto; Rudy Senyshen, Kitchener, West Central; C. E. Kirkby, Woodstock, Western. Activities of the four A.M.E.U. Sections were reported by: J. W. Hammond, Finance and Office Administration; F. G. York, General Administration; Harry Hyde, Engineering; Ray Pfaff, Association Operations, while S. R.

Walkinshaw gave the auditor's report. Markel Electric Products Ltd. became a commercial association member by unanimous vote. Concluding this session, Past President G. R. Davis presented Mr. Williamson with an oil painting and testimonial signed by all members of the 1958 Executive Committee and President's Council. ■

THE SECRETARY'S REPORT



W. R. Mathieson
A.M.E.U. Secretary-
Treasurer

SECRETARIES seldom draw chuckles with their annual reports.

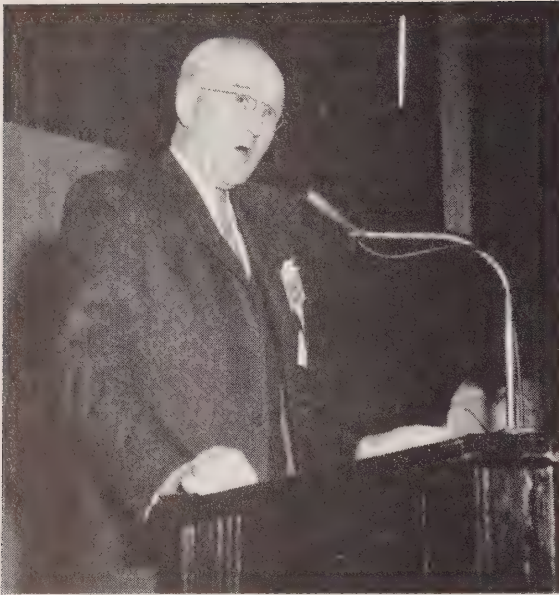
But W. Ron Mathieson did when he told A.M.E.U. delegates of asking executive friends what a secretary should report after other executive officers had detailed, in effect, the year's operation.

Their advice:

1. A dry recital of activities of the past year is for the birds;
2. You shouldn't have to sell your members on how good your association is;
3. The secretary should be seen and not heard;
4. I quit making reports and the attendance went up;
5. I write the whole blasted works, but my committee chairmen make the reports;
6. Let the president do it. It's his moment of glory.



IN RECOGNITION of his contribution to the A.M.E.U., retiring President J. A. Williamson was presented with an oil painting and a framed testimonial by G. R. Davis, Kingston.



W. ROSS STRIKE, Hydro's first vice-chairman, paid glowing tribute to the contributions of the O.M.E.A. and the A.M.E.U.

A TOAST TO

"THERE are no boundaries to achievement, if there is no thought as to who gets the credit or the glory."

With these words, W. Ross Strike, Ontario Hydro's first vice-chairman, saluted members of the O.M.E.A. and A.M.E.U., who, he said, "have applied themselves unselfishly and with great energy and dedication so that this great ideal of public ownership for the public good could, year by year, grow and flourish in our municipalities and across our province."

IT'S A FAIRLY SAFE BET that the "good old days" were vividly recalled by this group of former A.M.E.U. presidents (reading clockwise): M.J. McHenry, Toronto, 1921-22; Ross Dobbin, Peterborough, 1930; J.W.

Pearl, St. Thomas, 1931; A.W.J. Stewart, Toronto, 1929; C.W. Brown, Meaford, 1941; V.S. McIntyre, Kitchener, 1925; W.R. Catton, Brantford, 1934; R.H. Martindale, Sudbury, 1952; J.C. Keith, Windsor, 1949.



In proposing a toast to both associations (responded to by A.M.E.U. President J. A. Williamson and O.M.E.A. President Bert Merson), Mr. Strike mentioned three specific phases in the development of the O.M.E.A.: The formation period (until the death of Sir Adam Beck); the era of consolidation (until the commencement of World War II), and the period of rapid expansion and growth since the end of World War II.

In his comprehensive review of the problems and achievements of both organizations during the consolidation period, the speaker stressed that "Hydro is only successful when the component parts — Ontario Hydro, the municipalities (including the associations) and the Ontario Government—perform in their allotted spheres with the utmost diligence, goodwill and co-operation."

Co-operative Enterprise

Turning to the period following the Second World War, Mr. Strike made specific mention of three instances that have emphasized the co-operative nature of the Hydro enterprise:

1. The merging of the Niagara, Eastern and Georgian Bay Districts, into the Southern Ontario System permitted the establishment of a properly integrated grid and the pooling of the generation and transmission costs of 230-kv power;
2. The contribution of a maximum of 5 cents a kilowatt of the municipal load to establish a cost ceiling for high cost municipalities affirmed and re-established the principle of co-operation;
3. The decision to proceed with frequency standardization will rank high on the escutcheons of both or-



ONE OF the oldest delegates attending this year's annual meeting, Harry Miller, 86, Chairman, West Lorne, P.U.C., looks for familiar faces in the historical "Memory Lane" display.

ganizations as its benefits become more apparent.

Continuing, the speaker warned against "planning too far into the future, adding up fantastic costs year by year, all based on the present economy."

This, he said, could build grotesque goblins and monsters that "can scare us into all sorts of small-calibre, cautious and compromising decisions when we should be making courageous plans full of an abiding faith in our industry and integrity."

"By all means let us plan for the future, but let us first be prepared to base it firmly on principles that are realistic, well-founded and prudent, and then be prepared to pay the cost as and when it is necessary."

Pre-eminent Position

The A.M.E.U., Mr. Strike declared, has never been content with its efforts or achievements. It has, moreover, measured up to every problem until it stands pre-eminent in its field of technical electrical organization.

"Especially in this period of expansion it has, time after time, given the necessary impetus and leadership to the development and use of many standards, practices, applications and improvements in the field of distribution, and it now has assumed world-wide recognition and become an international leader in its field."

While both associations have been tested "in the crucible of unexpected pressures, quick decisions and continuous application of high technical skill and administrative qualities," the race is not won nor the course finished, Mr. Strike reminded his audience.

"We can only solve our future problems by building on the firm foundation so patiently built up by time and effort. As we inevitably continue to expand, let us hold firmly to the principle of effective co-operation and respect that has enabled us to solve our difficulties and meet our responsibilities as they arise." ■

PROPHETS' PANEL

**Public interest in electric heating is
"mushrooming," A.M.E.U. speakers report**

ONTARIO has warmed up quickly to electric heating, a panel of four "prophets" agreed at an A.M.E.U. management session during last month's annual meeting.

Delegates were told that:

- Since Ontario Hydro removed the restrictive rate on electric home heating last summer, public interest has mushroomed.
- Success in this new field requires educational and promotional programs involving Ontario Hydro, municipal utilities, industry and contractors.
- Heating equipment costs can be reduced.
- Plenty of power will be available to meet demand, and the cost will become more competitive with that of other fuels in the future.



• In any case, cost doesn't have to be a sales point.

Panelist Harry Hyde, Toronto Hydro's Assistant General Manager, made this last statement, and stressed it frequently amid applause from the audience.

While electric space heating must not be priced as a luxury item beyond the average householder, he said, it should be sold as electric lighting first was—for its contribution to comfortable living.

"I am sure that the early pioneers in our industry did not try to replace the coal oil lamp or gas jet or gas mantel on the basis of cost," he said.

"The cost of installing wiring and the cost of electricity was considerable in those days, but it did not take long for the people to appreciate the difference. . . Cost was not

the selling point—modern living was."

Mr. Hyde said the same approach will bring the same results in the new field of heating.

"So don't worry too much about our competition," he told delegates. "They offer nothing really competitive with what we have to sell. When you feel a little discouraged, just remember the early days of our industry and the fact that you don't see many candles or oil lamps around today."

Mr. Hyde said that, if only half the enquiries and proposed plans are realized, there will be hundreds of electric heating installations throughout the province by the end of the present year.

Gordon McHenry, manager of residential sales in Ontario Hydro's Sales Promotion Department, noted

that "it very quickly became apparent that we had miscalculated the pent-up interest in electric heating which had been growing for years beneath our restrictive rates."

Traffic Jams

Already, model all-electric homes have caused traffic jams. Realizing the job is too big for the utilities to handle alone, Ontario Hydro has appointed sales superintendents in each regional office to assist in promoting and co-ordinating the "Live Better Electrically" theme, including the electric heating program. This staff will be aided and supported by the Commission's Head Office staff, which will work with the A.M.E.U. committees to develop policy and procedures, and to provide technical and promotional information for regional and utility staffs.

(Continued on page 30)



PROPHET'S PANEL on electric home heating (left) produced lively audience participation. In the photograph above, Panel Chairman Harry Hyde, Toronto, is answering a question from the floor. Other panel members were: H. E. Brownhill, Stamford Township, and G. R. Davis, Kingston (left), with Gordon McHenry, Ontario Hydro (right).

If electric home heating is regarded as a major development, Mr. McHenry said, a large part of the promotion and control must be exercised through industry and such agencies as the Electric Service League of Ontario.

In conjunction with the Electrical Contractors Association of Ontario, the Commission is establishing special training courses for contractors, who are in the best position to promote electric heating among home builders.

The importance of adequate insulation is stressed in these courses, Mr. McHenry stated. In addition, Hydro plans short courses for its electrical inspectors, who will notify local supply authorities if any insulation changes are needed.

Mr. McHenry concluded: "The outlook is that there will be plenty of power available, that we will be able to generate what we need for this purpose, and that the cost will become more competitive with the cost of other fuels as time goes on."

Helpful Hints

H. E. Brownhill of Stamford Township, chairman of the new A.M.E.U. Committee on Load Promotion, offered these suggestions to utility managers:

- Keep a list of electrical contractors who have taken a heating course or are qualified to do electric heating work, and give each builder a copy.

- Advise the builder that heating calculations can be checked by an Ontario Hydro engineer or equipment supplier.

- Obtain from the sales superintendent in the regional office a list of electrically heated homes in the area. Builders will be glad to study them.

- Get any information a customer may require, and show a genuine interest in his particular job.

- See that the staff is familiar with all phases of electric heating promotion.

- Display equipment in your of-



ELECTRIC HOME HEATING commands the attention of four Capreol delegates (left to right): Mayor Harold Prescott, Bruce MacPhail, Alistair MacLean and E. C. Snook, North Bay, as A. B. Hayman, Consumer Service Engineer, Northeastern Region, discusses a portable heating unit.

fice, talk about electric home heating wherever you go, and have your employees do the same.

"Electric space heating is here to stay," said Mr. Brownhill, "so let's not be afraid of the unknown, but settle down and prepare to supply this new load in the same efficient way we have supplied loads in the past."

Alternative Solutions

G. R. Davis, of Kingston, chairman of the A.M.E.U. Rates Committee, could see only two solutions to the involved problem of rates.

One would be to record all energy consumption—including space heating—on the same meter.

The other would be the establishment of a multiple block rate, similar to existing rates, but extended to include space heating and all other loads.

"There are two very closely-related questions we must consider which did not appear to be quite so important a few years ago—public

relations and competition from other forms of energy," Mr. Davis added.

"For good public relations, our rates must be easily understood. Competition requires that we either sell for less or give better service.

"These two are so significant that I am very doubtful if we can take the time to make extensive and expensive rate studies to determine a theoretically perfect rate.

"In the meantime, we apply a rate on which we do not lose money and which results in satisfactory customer relations."

Discussion from the floor extended the session to more than 2½ hours, but nobody could answer one involved question: what does electric heating cost?

But Art Robinson of Markel Electric Products Ltd., one of several manufacturing representatives in the audience, added this optimistic note:

"We equipment people can get our costs down when the utilities sell electric heating."



WITH A combined record of more than a century of municipal electrical utility service to their credit, these two veteran A.M.E.U. members, C. A. Walters, Napanee (left), and O. H. Scott, Belleville, spent some time viewing the Memory Lane photographs and recalling old times.

DOWN MEMORY LANE

Ovid, the Roman poet, once wrote "for it is a pleasure, too, to remember."

His opinion was amply substantiated at this year's 50th annual gathering of O.M.E.A.-A.M.E.U. delegates, who evinced keen interest in the "Down Memory Lane" selection of historical photographs in the convention display room. Even comparative newcomers to the ranks stopped to inspect the display arranged by Ontario Hydro. For the veterans of the province's Hydro enterprise, it recalled the good old days in striking fashion, and many and long were the reminiscences exchanged beside the historical display arranged through the co-operation of several municipal utilities. Among the numerous visitors was V. S. McIntyre, retired manager of Kitchener P.U.C. and A.M.E.U. president in 1925. As proof of his long association and continuing interest in Hydro affairs, Mr. McIntyre proudly displayed an Ontario Hydro pass to Berlin Transformer Station, which, in October, 1910,



ANOTHER INTERESTED visitor was V. S. McIntyre, Kitchener (right), who proudly displayed a 1910 Ontario Hydro pass to Berlin Transformer Station to J. C. Montgomery, Cottam (see accompanying article for details)

delivered power to that community (now Kitchener)—the first Ontario municipality to inaugurate Hydro service.

Dentist: "I'm sorry, but I'm all out of gas."

Girl in chair: "Good heavens. Do dentists pull that old stuff too?"

A TRADITION MAINTAINED

(Continued from page 16)

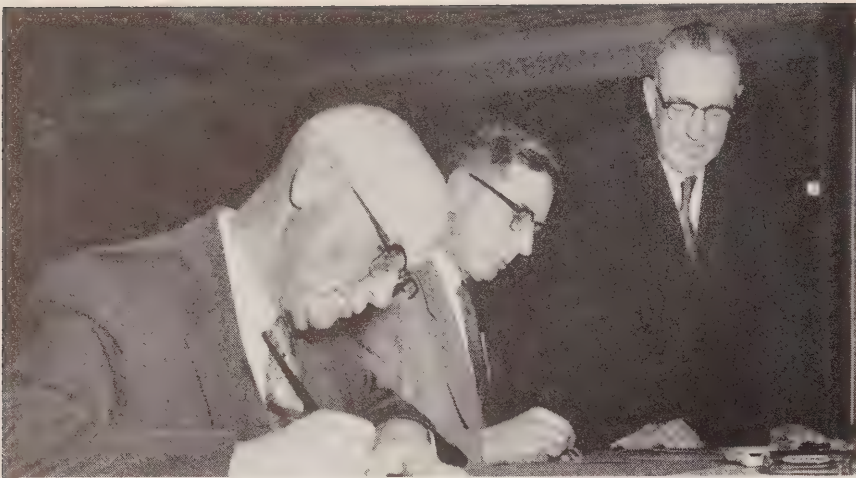
mated one year ago. It is contemplated that the cost of the program will be fully amortized by 1972, an earlier date than originally envisaged.

"LIVE BETTER ELECTRICALLY" PROGRAM Although the "Live Better Electrically" program was barely under way at the beginning of 1958, some 200 of the large municipal utilities, serving about 80 per cent of all municipal customers, were playing an active part in publicity and education by the end of the year.

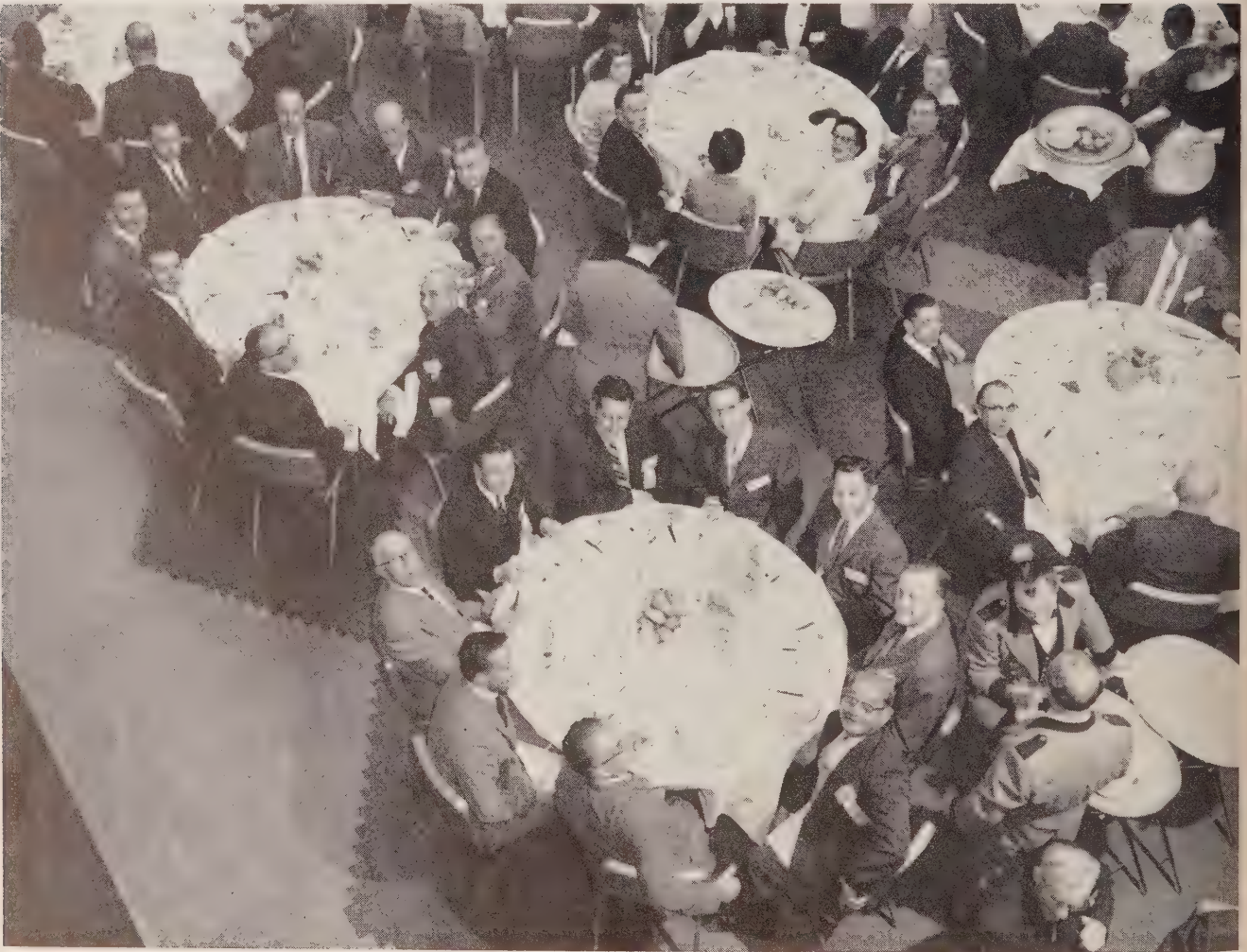
WATER HEATERS—Following intensive work by Hydro's Research Division in the development of a new, fast recovery electric water heater, the Commission authorized the purchase of some 2,500 of these heaters which were made available to Hydro's rural customers during the fall of 1958. A considerable number of municipal utilities implemented similar programs during the year.

ELECTRICAL SPACE HEATING—The Commission last August removed restrictions which had previously been necessary on this type of electrical consumption. For space heating purposes, a new minimum rate of 1.5 cents per kilowatt-hour was set. This new rate applies to Hydro's rural customers and may vary within the different municipalities. One hundred and forty municipal utilities had implemented a new space heating rate by the end of the year.

INTERCONNECTIONS—New interconnections with Hydro Quebec and the Power Authority of the State of New York completed in 1958—together with those already in existence (Detroit Edison Company, Niagara Mohawk Power Corporation)—make Ontario Hydro part of a power grid more than 500,000 square miles in area with resources of approximately 26,000,000 kilowatts.



AMONG THE FIRST to register at this year's annual O.M.E.A.-A.M.E.U. meeting were these three Penetang representatives (from left): Edgar Brooks, R. J. Gauthier and E. G. Nelson.



THINGS were definitely "looking up" when the photographer succeeded in attracting the attention of these obliging convention delegates.

CONVENTION CANDIDS



EXTENDING CONGRATULATIONS to O.M.E.A. President Bert Merson on his re-election were Mayor Catherine Sepala, Fort William, and C. J. R. Ballantyne, Kapuskasing, right, while Dr. V. S. Wilson, executive vice-president, and Secretary-Treasurer D. P. Cliff smilingly echo the sentiments.



ALL DELEGATES signed the book of remembrance commemorating the 50th annual meeting of the two associations. Here four Belle River delegates (left to right): Al O'Connor, Armand Denomey, Reeve John George and Raymond Sauve place their signatures in the record book.



FOUR LONDON P.U.C. representatives (left to right): C. C. Calder, Elmo Curtis, Stewart Killingsworth and V. A. McKillop study a meter in the exhibit room which was registering the combined electrical demand of 20 London water heaters relayed to Toronto by a telephone circuit.



WHILE REMINISCING about past meetings of the O.M.E.A. and A.M.E.U., H. O. Hawke, Galt (left), and fellow-veteran Henry Longhurst, Windermere, compared their winter experiences. Mr. Hawke had just returned from a Caribbean vacation while Mr. Longhurst established a record of five miles a day on snowshoes checking his Muskoka properties.

ON THE DISTAFF

THIS year's O.M.E.A. - A.M.E.U. annual meetings had special significance for lady delegates.

For the first time, they participated in a program of their own, as well as attending two luncheons and the evening banquet with the male delegates.

While a joint association meeting was in progress, the distaff side boarded two chartered buses and toured a model, all-electric home at Cooksville, west of Toronto. Because of their close connection with the electrical field, these homemakers could doubly appreciate an electrically heated home.

Afternoon tea at the Old Mill

provided a gracious finale to the afternoon's tour.

Wednesday morning, delegates' wives gathered in the Territories Room for coffee, an assortment of rolls, blueberry muffins and hot cross buns, and, of course, informal discussion. One of the highlights of the "Coffee Club" was a demonstration of "Better Ways of Home Lighting" by Bob Smart, Ontario Hydro information officer. Aided by a demonstration lamp and a number of shades, he illustrated the types and location of portable lamps to achieve the most effective lighting effects.

Mrs. W. N. Moore, Port Hope, found that arriving first for coffee

had its advantages. C. E. Cansfield, president of the Kummerial Klub, presented electric kettles to her and to Mrs. W. C. Winter, Walkerton, who was sitting in the northwest corner of the North West Territories Room.

Hostesses for these events were Miss Connie Kinnear, home economist with Toronto Hydro, and Miss Lois Hurst, home economist with Ontario Hydro.

Did the ladies enjoy having a program of their own, as well as ample time for shopping? One delegate's wife summed up the general feeling in her gleeful comment: "We've been recognized!"



△ TOURING a model, all-electric home at Cooksville, Ont., two lady delegates, Mrs. W. E. Theaker, Paisley (left), and Mrs. Armand Ranger, Capreol, examine the heating elements.

DURING the coffee party, Mrs. W. C. Winter, Walkerton (centre), and Mrs. W. N. Moore, Port Hope, received surprise presentations of electric kettles from C. E. Cansfield, Toronto, Kummerial Klub president.





SEVERAL lady delegates took time out to inspect the Royal York kitchens. Platters of hors d'oeuvres displayed by three chefs are admired by a Fort William trio (from left): Mrs. J. R. Aiken, Mrs. A. W. Taber and Mayor Catherine Seppala.



HOME LIGHTING, demonstrated by Bob Smart, Ontario Hydro information officer (left), highlighted the coffee party. Watching the demonstration (from left) are: Mrs. W. C. Salmon, Dashwood; Mrs. W. L. Wade, Nipigon; Mrs. W. H. Walker, Port Hope, Mrs. Harold Schroeder, Mrs. Erwin Rader, Dashwood



VETERANS APPLAUDED

HIGHLIGHTING the concluding luncheon at the historic and successful 50th annual meeting of the O.M.E.A. this year, delegates applauded the presentation of long-service awards to 19 veteran municipal Hydro commissioners with a combined total of 331 years' service.

Framed scrolls were presented to the utility commissioners "in grateful recognition" of their "contribution to the progress of the municipal Hydro system."

Accorded a place of honor during the convention luncheon, the long-service commissioners were accorded a rousing ovation by the large assembly of delegates as they entered the banquet hall.

Performing the honors in this ceremony, which was inaugurated in 1954, W. Ross Strike, Q.C., Ontario Hydro's first vice-chairman and a former O.M.E.A. president, eulogized the unswerving devotion of the recipients to the ideals of Detweiler, Snider and Beck in helping to place Hydro in its present foremost position.

Mr. Strike took the occasion as an opportunity to introduce Dr. A. A. Metcalfe, Almonte, who has been identified with electrical operations in that municipality for 54 years.

Senior commissioner honored this year was J. E. Gamble, who is marking 27 years' service as a commis-

sioner with Richmond Hydro-Electric Commission.

Others receiving scrolls were: Charles S. McLaren, Highgate, 26 years; Volney Stuart, Merritton, 24; H. E. Reece, Cayuga, 19; Murton S. Scott, Highgate, 19; Joseph Bull, Collingwood, 17; H. Jas. Monkhouse, Thedford, 17; Laurence Box, Parkhill, 16; Oliver H. Smith, Q.C., Midland, 16; Charles Doherty, Beaverton, 15; D. E. Anderson, Grimsby, 15; Howard LaChanse, Merritton, 15; A. W. Hollingshead, Woodbridge, 15; Wilburn V. Mark, Bobcaygeon, 15; James Ross, Whitby, 15; Charles Lamb, Lindsay, 15; Dr. L. Herracher, Arnprior, 15; George A. Shepherd, Elora, 15; and Stanley Vincent, Springfield, 15. ■



W. ROSS STRIKE (LEFT) presents 27-year service scroll to J. E. Gamble



Murton S. Scott, Highgate, 19 years



H. J. Monkhouse, Thedford, 17



W. V. Mark, Bobcaygeon, 15 years



aren, Highgate, 26 years



Volney Stuart, Merriton, 24 years



H. E. Reece, Cayuga, 19 years



Laurence Box, Parkhill, 16 years



Oliver H. Smith, Q.C., Midland, 16 years



Howard LaChanse, Merriton, 15 years



ge A. Shepherd, Elora, 15 years



A. W. Hollingshead, Woodbridge, 15 years



Charles Lamb, Lindsay, 15 years

ASSOCIATIONS NAME OFFICERS



RAY PFAFF



BERT MERSON

BERT MERSON, chairman, Toronto Electric Commissioners, was unanimously re-elected President of the Ontario Municipal Electric Association at the concluding session of the association's 50th annual meeting in Toronto.

Members of the Association of Municipal Electrical Utilities (of Ontario) at the same time chose a new executive for 1959 with W. Ray Pfaff, manager of St. Catharines Public Utilities Commission, as their President.

O.M.E.A. OFFICERS

Members elected the following slate of officers for the ensuing year:

Vice-Presidents: H. S. Graham, Newcastle; A. T. Smith, North Bay; R. B. Chandler, Port Arthur; Dr. V. S. Wilson, Etobicoke Township; C. R. Buss, Thorold; H. M. Scheifele, Waterloo; P. R. Locke, St. Thomas, and Roy Warwick, Blenheim.

CONCLUDING their historic and successful 50th annual meeting in Toronto, members of the Association of Municipal Electrical Utilities (of Ontario) elected a new executive to serve for 1959. Left to right the new members are: W. A. Secord, Brantford; Ronald Harrison, Scarborough Township; Stewart Holt, Midland; E. L. Burnham, Belleville; N. H. MacKinnon, Sudbury; R. S. Reynolds, Chatham; F. G. York, Ottawa, Vice-President; Harry Hyde, Toronto, First Vice-President; J. A. Williamson, Niagara Falls, Past President; W. Ray Pfaff, St. Catharines, President; W. R. Mathieson, Toronto, Secretary-Treasurer; H. W. Little, Brockville; S. R. Walkinshaw, Orillia; E. A. Vigars, Port Arthur; Stanley C. Webster, Tillsonburg; D. M. Seath, Stratford, Vice-President; J. A. Torrance, Etobicoke Township, and A. W. Taber, Fort William.



Directors: District 1—L. L. Coulter, Ottawa, and E. J. Bryant, Whitby; District 2—J. M. Low, Uxbridge, and Harry Thiess, Orillia; District 3—W. A. Ferguson, Atikokan Township, and E. G. Carson, Fort William; District 4—A. H. Waites, Mimico, and J. T. Armstrong, Georgetown; District 5—F. R. Kaupp, Merritton, and Roy Pier-son, Cainsville; District 6—J. F. Edwards, M.P.P., Palmerston, and T. J. Moffat, Listowel; District 7—G. E. Brown, Aylmer, and S. M. Emery, Parkhill; District 8—T. A. Cada, Tecumseh, and T. C. Odette, Tilbury; D. P. Cliff, Dundas, Secretary-Treasurer.

Chairman James S. Duncan, Ontario Hydro, was named honorary president while the following were elected to serve as honorary vice-presidents:

K. A. Christie, Q.C., Toronto; M. J. Elliott, Bowmanville; C. J. Halliday, Chesley; H. O. Hawke, Galt; G. F. Hutcheson, Huntsville,

and W. Ross Strike, Q.C., Bowmanville.

A.M.E.U. OFFICERS

Mr. Pfaff, who has been prominently identified with the A.M.E.U. in numerous responsible capacities for 21 years, succeeds J. A. Williamson, P.Eng., manager, Niagara Falls Hydro-Electric Commission, now immediate past president.

Members named the following executive for 1959:

First Vice-President—Harry Hyde, P.Eng., assistant general manager, Toronto Hydro - Electric System; Vice-Presidents—F. G. York, P.Eng., general manager, Ottawa Hydro-Electric Commission; D. M. Seath, P.Eng. general manager and secretary-treasurer, Stratford Public Utility Commission; Directors-at-large—Ronald Harrison, P.Eng., manager and secretary-treasurer, Scarborough Township Public Utilities Commission; S. R. Walkinshaw,

P.Eng., manager, Orillia Water, Light and Power Commission; C. W. King, manager, Dresden Utilities Commission; District Directors—H. W. Little, P.Eng., manager, Brockville Public Utilities Commission; E. L. Burnham, P.Eng., assistant manager, Belleville Utilities Commission; Stewart Holt, secretary-treasurer, Midland Public Utilities Commission; L. E. Richardson, manager, Merritton Hydro-Electric Commission; N. H. MacKinnon, P.Eng., manager and secretary-treasurer, Sudbury Hydro-Electric Commission; E. A. Vigers, P.Eng., manager, Port Arthur Public Utilities Commission; John Torrance, P.Eng., chief engineer, Etobicoke Township Hydro-Electric Commission; W. A. Secord, P.Eng., assistant manager, Brantford Public Utilities Commission, and Stanley C. Webster, P.Eng., manager, Tillsonburg Public Utilities Commission; Secretary-Treasurer—W. R. Mathieson, Toronto.

MEMBERS of the Ontario Municipal Electric Association re-elected Bert Merson as their President for 1959. Left to right the new officers are: T. J. Moffat, Listowel; A. J. Smith, North Bay; R. B. Chandler, Port Arthur; C. R. Buss, Thorold; J. M. Low, Uxbridge; J. Fred Edwards, M.P.P., Palmerston; Secretary-Treasurer D. P. Cliff, Dundas; President Bert Merson, Toronto; Immediate Past President Gordon Fuller, Windsor; Dr. V. S. Wilson, Etobicoke Township, Executive Vice-President; T. C. Odette, Tilbury; Amos Waites, Mimico; L. L. Coulter, Ottawa; Frank Kaupp, Merritton; and Howard Scheifele, Waterloo.



off the wires

An item in a recent edition of the *St. Thomas Times-Journal* reports that the staff of Port Stanley P.U.C. has found a new and unusual use for hula hoops. In their search for a suitable framework for the garlands of evergreen and colored lights used in decorating village streets during the Christmas season, they discovered that the hoops were the ideal solution.

There's considerable interest in the Canadian Westinghouse Co. Ltd. announcement that its lamp division has developed a new type of standard light bulb. The new bulb is cylindrical in shape, and according to a company claim, its functional styling permits important improvements in construction, resulting in superior illumination. This is said to be the first major change in light bulb design in more than 25 years. In 1919, the looking-glass tip was eliminated. Then the industry introduced inside frosted bulbs in 1925. In 1956 Westinghouse developed a line of tinted light bulbs designed to achieve a flattering, decorative effect in the home. The new lamp is called the "all new, Eye-Saving white bulb."

Although he had a positive genius for organization and could set a pace that would kill an ordinary man, Sir Adam Beck was noted for his "peppery" character and his somewhat vivid comments on the vagaries and actions of his adversaries. We've been wondering lately how he would have greeted the news that the statue to his memory on Toronto's University Avenue, together with the adjacent South African War memorial, are to be put in temporary storage while work is in progress on the new Bloor-University Avenue subway.

In a recent issue we published a brief item relating to the election of W. G. (Bill) Vivian, Hamilton Hydro-Electric System, as President of the Niagara District Electric Club. Mr. Vivian has drawn our attention to the fact that several Hamilton and Ontario Hydro representatives were original members of the club. C. H. Hutton, Hamilton's former Chief Engineer, was the club's first President 20 years ago. A. W. Bradt and J. W. Hammond, former and present general managers of Hamilton Hydro, were on the original executive while Mr. Hammond was the 1955-1956 President. Another former member of the Hamilton Hydro staff, J. L. Cartwright, was President in 1948-1949.

The Canadian Red Cross Society which, incidentally, is marking its 50th birthday this year, states that an average of 46 out of every 100 Canadian blood donors have O type blood; 40 are A type; 10, B type, and 4 have AB blood. Of these, 85 are Rh positive; 15 Rh negative. Seven of the 15 negative donors are O group; 6 are A; 1½ are B, and less than 1 are AB negative.

From what we hear, opening ceremonies are to be the vogue for 1959. Trafalgar Township P.U.C. and the Township of York Hydro System have been putting the finishing touches on new buildings and formal inauguration of each is scheduled for a later date.

Congratulations to George A. Phillips, Smiths Falls Hydro, who has been elected to Smiths Falls municipal council, leading the polls in the last election contest. Another well-known O.M.E.A. figure, E. V. Dyke, is mayor of that busy community.

They get things done in a hurry at Thorold. H. A. "Tooner" Howard, Manager of Thorold P.U.C., had just arrived home from last year's annual O.M.E.A.-A.M.E.U. Convention when fire broke out in the utility headquarters, completely destroying the structure. Today the staff is occupying a \$60,000 ultra-modern, glass-facaded headquarters, and plans are being formulated for a formal opening.

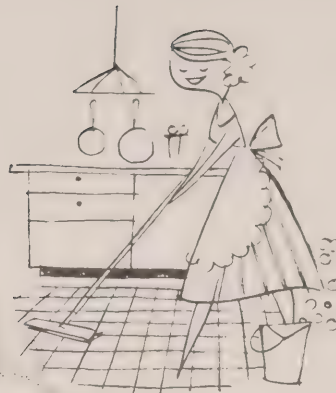


A new thermal heat-and-power plant at Hasselby on Sweden's Lake Malar, which is to supply 60,000 Stockholmers of the western suburbs with heat and hot water and provide the city's power network with 80,000 kilowatts of electric power, is nearing completion. It will have the largest electrical output of any such combined plant in Sweden.

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Two class 30 Burroughs utility billing machines, carried under service contract until recently. Address inquiries to R. Taylor, Office Manager, St. Catharines Public Utilities Commission, 129 Church Street, St. Catharines, Ont.



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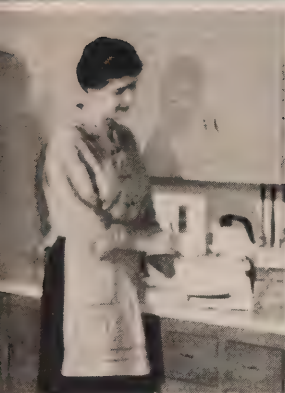
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the safe, clean, modern way!



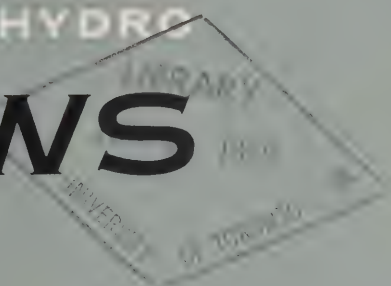
Delegates attending the 50th annual O.M.E.A.-A.M.E.U. meeting this year may recognize themselves at the 1921 convention.





Electricity—The City's
Silent Servant (See page 2)

ONTARIO HYDRO NEWS



MAY, 1959



ONTARIO HYDRO NEWS

MAY, 1959

VOL. 46, No. 5



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COVER SHOTS

In keeping with our leading article this month, "Silently it Serves a City", the front cover illustrates some of the manifold benefits and applications of electricity.

THE MEANEST THIEF

(*The Montreal Gazette*)

WHEN people hear about something too much and for too long, they tend to become bored or hardened. This is the danger with inflation. When a danger is present as long as inflation has been, it may become difficult to think of it as a menace. Inflation may come to be regarded as only one of the familiar problems of living—here yesterday, today and tomorrow.

But the best answer to this temptation to be indifferent is to remember whom it is that inflation hurts the most. Inflation is hardest upon those least able to bear it. The cruelty of inflation to those helpless to fight back should haunt the mind of everyone.

President Eisenhower put it very well in his State of the Union message, when he said:

"Inflation is not a Robin Hood, taking from the rich to give to the poor. Rather, it deals most cruelly with those who can least protect themselves. It strikes hardest those millions of our citizens whose incomes do not quickly rise with the cost of living. And when prices soar, the pensioner and the widow see their security undermined. . . ."

There are those who have been able to keep abreast of inflation, or even to get ahead of it. In terms of "real dollars" they are better off than they were. But anyone who contributes to inflation in the effort to keep ahead of it may be himself striking at those who can least protect themselves.

The curse of inflation becomes real when it is brought down to plain human terms. Few indeed would be willing to open the purse of a poor widow, when she was not looking, and extract a few dollars, in order that he might keep ahead of inflation himself.

Nor would he climb into the room of a pensioner and remove a few dollars he had just received from his monthly check. Yet all who add to inflation by trying to get ahead of it are doing just this. And the robbery is nonetheless real because it is done indirectly, or at some distance.

Before anyone gets weary of hearing about inflation, he should remember its cruelty to the defenceless. So long as that is remembered, inflation can never be accepted. No one wants to come to terms with "the meanest thief."

MAY, 1959



These control rods and supporting tower of the new McMaster nuclear research reactor at Hamilton, Ont. (see "Atoms on the Campus" — page 10) have been immersed in thousands of gallons of water. The bridge, visible at the top, and the control tower, which supports the reactor core, can be moved the entire length of the reactor pool.

SILENTLY IT



SERVES A CITY

*Electricity has
become the indispensable
but self-effacing
ally of all mankind*

BY RON KENYON

SILENTLY a servant is at work within the city, striking glass bulbs to radiant life, beating like a heart within the engines of great machines, standing at the elbows of surgeons and guiding aviators safely to the ground. His name is Electricity, and he is greater by far than the genie of Aladdin's lamp.

Looking over the city from a tall building at night he can be seen at work in myriad ways. If the citizens of Toronto rarely think of him they do him no injustice; like the perfect servant, he is useful but self-effacing.

Yet only a few generations ago, gaslights left the city streets in shadows, horse-drawn tram cars rattled and bumped their bone-shaking way at a snail's pace, and in the homes women scrubbed their clothes by hand.

It is difficult to believe, looking over the City of Toronto, which virtually lives by electricity, that Canada's first electric generator only began operation in 1881. It was



GIANT NEON SIGNS illuminate the night sky. Today Canadians hold a top position in the world for per capita use of electricity.

built by John J. Wright, a young millwright from England.

Wright got permission to set up arc lights on Yonge Street between the waterfront and what is now Dundas Street, and on King and Queen Streets between Church and York. He arranged for a supply of steam from the *Toronto World*, a well-known Toronto newspaper in those days, and started his electric generator in a building near King and Yonge.

He was strongly attacked for what the citizens of the day felt was an invention that might lead the women-folk to idleness. But progress got its way, and, so far as is known,

(Continued on page 4)



(Photograph by courtesy of T. Eaton Company Ltd.)

the first motor run by electricity was one set up by Wright to drive a coffee grinder in the window of the T. Eaton Company.

To envisage what Toronto or any large city would be like without electricity today is almost impossible. So dependent is the average citizen upon it that man has virtually built cities around power. In 1931, when Thomas Edison died, it was suggested that all electricity be cut off for one minute in remembrance of his contributions to science. But Edison finally achieved a greater tribute than that, for it was decided not to shut off the power—it would have brought the entire nation to a stop. Electricity

couldn't be dispensed with, even for a minute.

When accidental breakdowns occur, the result is often serious, even though many essential services have standby batteries and diesels. It would be difficult if not impossible to safely shut off all electricity, including that from the standby sources.

What does electricity do for a city?

First, it supplies light... an estimated five million lamps in Metropolitan Toronto homes. It powers the home appliances, of which there are at least 11 in the average Ontario home. Many homes have far more than that number, for there

are some 70 items on the market today, compared with the 19 domestic appliances that a householder could buy in the early 1930s regardless of his bankroll. Modern appliances include: ranges, refrigerators, washers, toasters, irons, kettles, vacuum cleaners, floor polishers, radios, television sets, hot water heaters, freezing units, washer-dryers, dishwashers, electric blankets, shavers, clocks, fans, record players, food mixers, coffee makers and sun lamps.

Electricity, too, is the motive force that operates teletype, telephone, radio and television equipment. Aside from the commercial radio stations, there are many other

▷ OPERATING his electric train, this youngster is blissfully unaware that there are some 70 electrical items available to the average residential Hydro customer in Ontario.

▷ HOW WOULD the do-it-yourself home-owner get along without Hydro service? In the area served by Toronto Hydro, consumption of electricity has more than quadrupled since 1945.



EVEN our morning coffee needs electricity! A junior customer takes a keen interest in the operation of a chain-store coffee grinder.



radio systems used by taxi companies, police and Hydro, which broadcast on their own wavelengths.

Electricity has changed the architecture of the city — for it moves the elevators and escalators in the tall buildings which now dominate the skylines. Electric air-conditioning equipment is bringing about a further change in architecture, since offices no longer require windows for air; they can be comfortably ventilated and cool though deep inside a building.

In the offices of the tall buildings, electricity takes work off human shoulders. It supplies power for adding machines, electric typewriters, duplicators, stenographic recording devices and cash registers.

In industry it performs tasks beyond number, helping to manufacture everything from farm machinery to pins, from tap washers to fur coats.

Since World War II started, Canadian manufacturers have quadrupled their use of electrically-powered machinery which now does 80 per cent of their work. Some

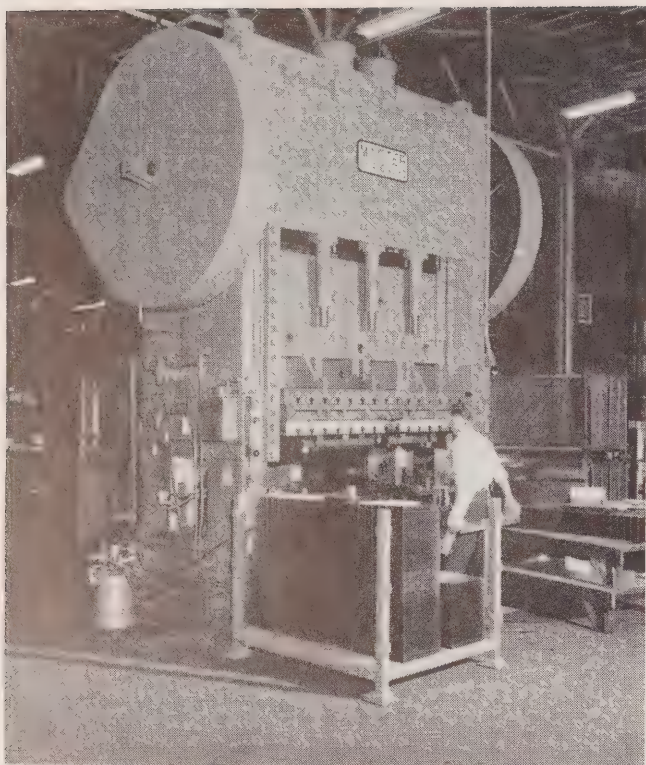
of Canada's basic industries would never have developed without electricity. That category could include the aluminum industry, chemical, petroleum and pulp and paper; and, of course, our communications and entertainment industries were built on electric power.

Seven Times Greater

Since 1940, residential and farm customers' consumption of electricity has multiplied seven times. More than 25 per cent of Canada's households have no bath or shower, but only five per cent can get along without electricity. Today, Canadians rank among the largest per capita users of electricity in the world (5,500 kilowatt-hours per person, per year).

In the realm of lighting, Toronto ranks as one of the best lighted cities in the world with 30,000 street lights in the city and Leaside. Within the Metropolitan area there are estimated to be more than 50,000 street lights.

Light alone—considered the most important single use for electricity
(Continued on page 6)



MANY INDUSTRIES have been built on electricity. Canadian manufacturers have quadrupled the use of electrically-powered machinery in 10 years.



CANADIAN industry's increased use of electricity is due to its flexibility for manufacturing anything from cars to coats.

— has revolutionized everyone's life. Though there were previous ways of making light, electricity alone succeeded literally in turning night into day.

Perhaps the greatest single concentration of light in the city is at Varsity Stadium, rated the best lighted outdoor stadium in Canada. It requires 384 bulbs of 1,500 watts each, burning at 10 per cent over-voltage — enough light for 500 average homes!

Even within the realm of lighting, electricity provides a wide choice for the user. There are the incandescent bulbs, used by most homes and streets; there are fluorescent fixtures now almost uniform in modern offices; out along Ontario's Highway 401, the buildings are lighted with sodium vapor floods (the most economical single light source for its purpose), while the new Frederick G. Gardiner Expressway is brightly illuminated by fluorescent lamps.

Within the broad and booming field of advertising, there are the neon, argon and all the other colored lights along the streets — no one knows how many.

And for junior, on his way to bed, there is the tiny, dim night-light, utterly safe and reliable, to keep away his fear of the dark. Though he does not think of it, he enjoys the benefits of electricity in the train he got for Christmas and the tiny, colorful record player that sings his nursery rhymes.

Controls Traffic

The people of the city move to work and home again on the wheels of the subway; the streetcars and several buses are powered by electric current; and those who drive, obey the imperious command of the 500-odd traffic signals, which control the roads of Metropolitan Toronto.

Less conspicuous than these services, yet no less vital are the electric

pumps, which operate the city's water and sewage systems. Without them, sewage could not be disposed of, and taps would go dry where boosting systems failed.

At Malton and other airports, the 'planes rely on electric lights as beacons, and ships on the lake watch the electric beacons in the light-houses along the shore. Today, electricity not only supplies light for these lighthouses — it controls itself too, for these installations are remotely controlled by electronic devices.

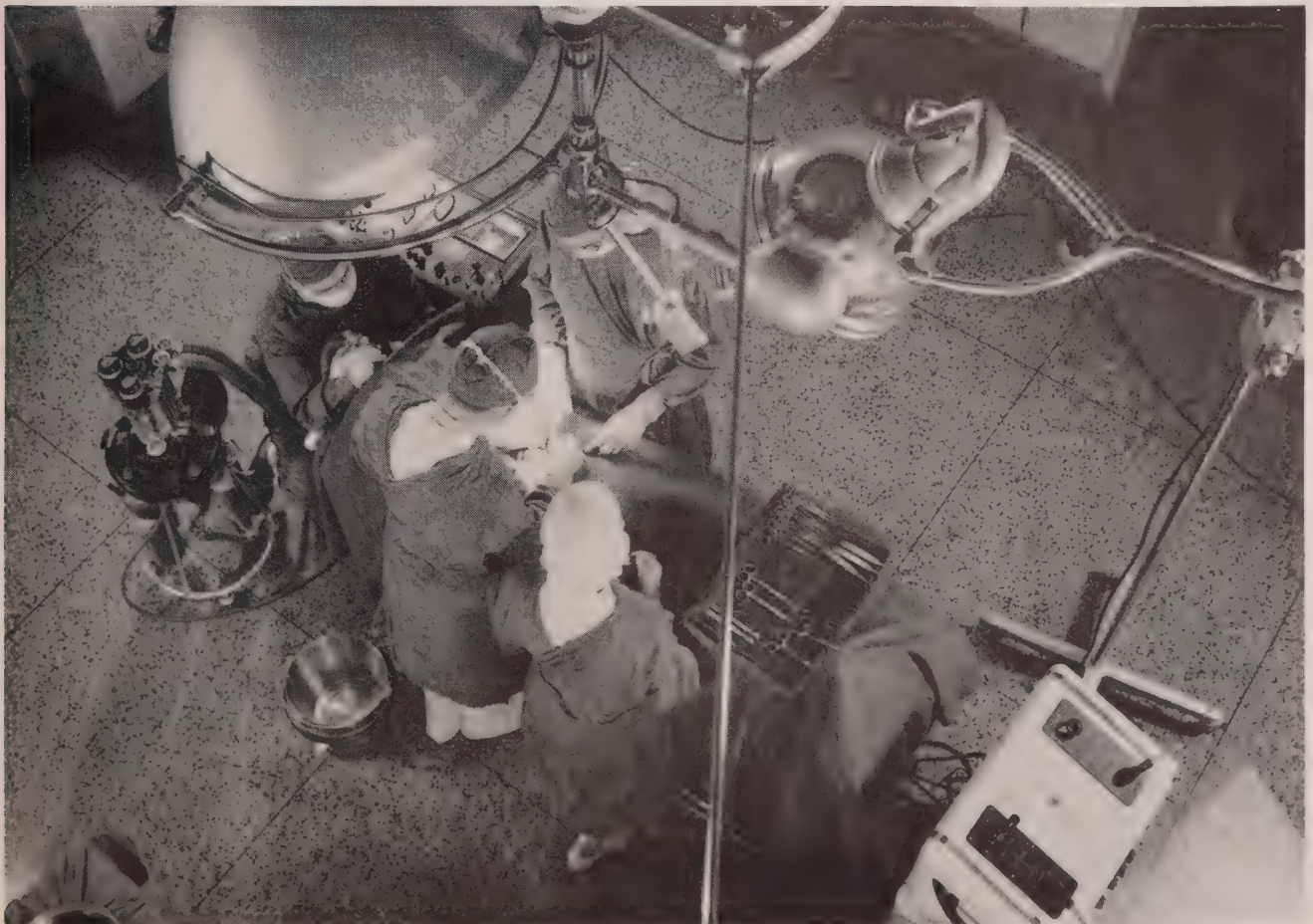
But these are not all the things that electricity does. These are only a very few of the more obvious things. It lights the operating tables in hospitals, powers the electroencephalographs that record brain impulses during serious operations, and makes X-ray machines possible.

It moves trains, cranes and bridges, activates the telephones and

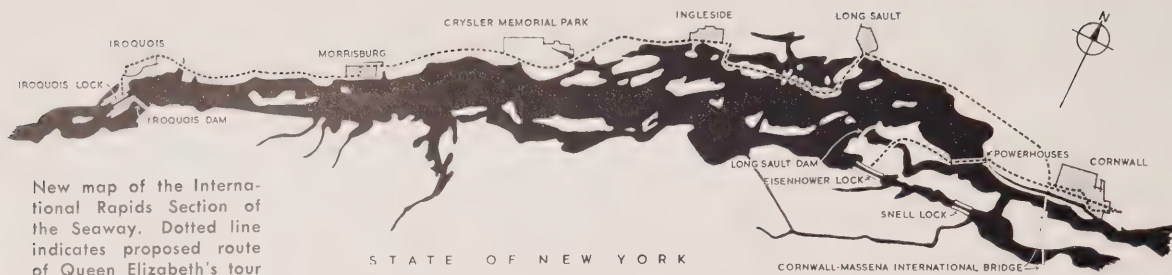
(Continued on page 29)



ELECTRICITY HAS CHANGED the architecture of many cities for it moves the escalators and elevators in hundreds of tall buildings.



EVEN MORE IMPORTANT, it lights hospital operating tables and provides power for countless new techniques in surgical treatment.

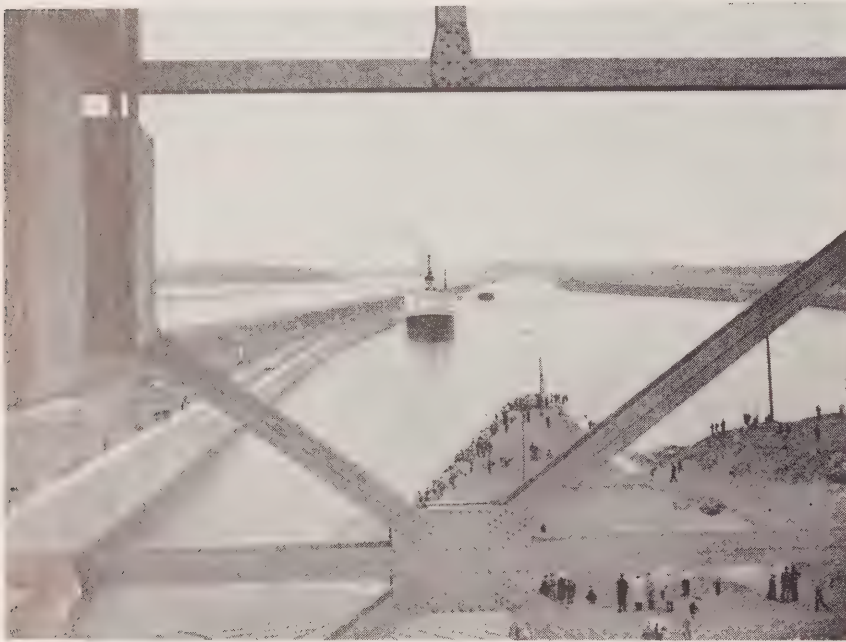


New map of the International Rapids Section of the Seaway. Dotted line indicates proposed route of Queen Elizabeth's tour of the area.

YOU

Trim ocean

By J. G. FOSTER



THEY'RE OFF! Canadian Government ice-breakers, d'Iberville and Montcalm, lead 70 ships into the St. Lambert Lock near Montreal as the Seaway race begins. The big question: who will be first through the Seaway to Toronto with their cargo of overseas goods?

THE WINNER: a flying Dutchman prepares to tie up at Toronto's waterfront, six hours ahead of her nearest rival in the dash for Seaway honors. Despite damage, the Prins Willem George Frederik cut two days from the old schedule.



CHAMPION of the 342-mile Seaway race, Captain Steve Aaldijk, receives congratulations and a dispatch case from George A. Wilson, acting chairman of the Toronto Harbor Commission. Next stop was Hamilton for similar honors.



CAN'T BEAT THE DUTCH

el from Holland inaugurates deep-sea ports of Toronto and Hamilton

GOVERNMENT and port officials cheered, flashbulbs shattered the waterfront's pre-dawn gloom, and at 5:44 a.m., April 27, Toronto became a deep-sea port.

Despite ice damage to her bow and propeller, the Dutch ocean vessel *Prins Willem George Frederik* had won the 342-mile race from Montreal and the distinction of bringing Toronto its first overseas cargo through the St. Lawrence Seaway.

Her passage cut more than 48 hours off the former time of four to five days through the old canal system—a striking example of the Seaway's importance to shippers.

The *Prins Willem* had led an armada of 70 ships from the time she followed the Canadian Government icebreakers *d'Iberville* and *Montcalm* into the St. Lambert Lock near Montreal. The race began to the cheers of 5,000 lined up on shore for the opening, and the excitement kept up along the route.

As a traffic jam built up in Toronto's swarming harbor, winning Captain Steve Aaldjik, a veteran of 21 years' ocean sailing, found himself and his crew the heroes of what Provincial Treasurer James Allan called "a red-letter day for Toronto and Ontario." They whirled through a day of welcoming ceremonies and

congratulations, then steamed on to more presentations at Hamilton where a crowd of 700 hailed the birth of another Seaway port.

From send-off to unloading, the enthusiasm was only a foretaste of the celebration, which will greet the official opening by Queen Elizabeth II and President Eisenhower on June 26 this year.

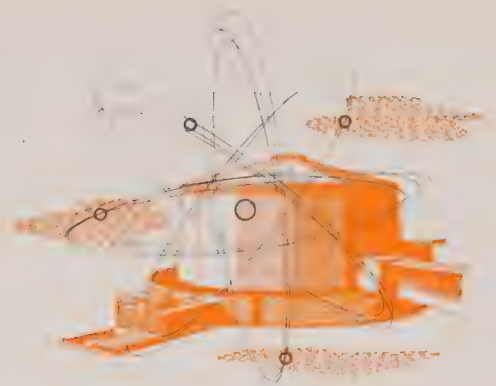
Later, the Royal yacht will bear the Queen and Prince Philip to Cornwall for the next day's unveiling ceremony at the partner development, which was an integral and indispensable part of Seaway planning and construction—the St. Lawrence Power Project. ■

SUDDENLY A SEAPORT, TORONTO HUSTLES TO KEEP UP WITH BUSINESS AS THE FIRST FLOOD OF SEAWAY TRAFFIC KEEPS THE HARBOR HUMMING.



Hamilton's McMaster University reactor goes critical





REACTOR is housed in a 15-sided windowless building, 82 feet in diameter and 72 feet high. A bridge joins the reactor to the Nuclear Research building.

ATOMS ON THE CAMPUS

by PETER MAITLAND

CANADA'S first privately-owned nuclear reactor began operation on the campus of McMaster University in Hamilton last month.

A major advance in the Canadian program to develop peaceful uses of the atom, the experimental reactor will produce neutrons, gamma rays and isotopes for research in the physical and biological sciences, engineering and medicine.

The McMaster reactor was officially opened by Prime Minister John Diefenbaker, who called it a symbol of mankind's quest for peace and an assertion of faith in the constructive benefits of science.

The \$2,000,000 project was financed by grants from Canadian Government research agencies and Ontario Hydro and by contributions from private industry.

The McMaster reactor will make a great contribution to Canadian nuclear research. In addition to assisting nuclear science teams now

working at the university, the reactor will be of help to other research organizations in the development of new projects. It will also serve industry and aid in the teaching of nuclear science to students.

The reactor is housed in an almost circular, 15-sided concrete structure, which rises 72 feet above ground level. Resembling a medieval fortification, the severe lines of the windowless reactor building contrast sharply with the traditional university architecture of the surrounding campus.

Access to the reactor building is gained through a glassed-in walkway from the Nuclear Research Building. Visitors are checked in and given a film identification badge before passing through an air-lock access room to the operating floor where the reactor is situated.

The reactor (a light-water moderated, heterogeneous solid fuel reactor) consists of a tile-lined concrete pool, filled with 100,000 gallons of purified water. Appropriately enough, it is known as a swimming-pool reactor. The pool rises 35 feet from the experimental floor of the

building through to the second (operating) floor.

The reactor core is clearly visible 25 feet below the surface of the water. Consisting of an array of thin sheets of aluminum and an alloy of uranium, the core is about the size of a modern refrigerator. The enriched uranium used as fuel is supplied by the United States Atomic Energy Commission.

The water around the reactor core provides a shield against radiation, removes heat and slows down neutrons so that they can initiate fission in the U-235 atoms. In addition, the swimming pool design permits researchers to lower materials into the pool at varying distances from the core for irradiation.

Water in the reactor is maintained at a temperature of 100 degrees. Excess heat is taken off by a heat exchanger, and dissipated in cooling towers outside the building. The reactor will initially operate at a heat rating of one megawatt, but provision has been made in the design to permit operations of up to five megawatts in the future.

(Continued on page 12)

PRESERVERS add to the swimming-pool appearance. The travelling crane, high above the operating floor is mirrored in the surface of the pool.



THIS VIEW from the interior of the hot cell illustrates how radioactive specimens from the pool will be handled by the "slave manipulator"—an intricate pair of arms and hands designed for this work. The viewing window is made of lead glass, three feet thick.

The reactor is operated from two bridges which span the pool. These manually - operated bridges move back and forth on tracks along the side of the pool. One carries the reactor control machinery and the other supports experimental equipment which can be lowered into the pool. High above the operating floor is a circular track, 12-ton crane which is used to move heavy equipment or radioactive material.

Vertical Gate

The pool is divided by a vertical gate, which permits the reactor to be stored in one section while changes in experimental equipment are made in the other. Fuel rods taken out of service are stored in containers near the bottom of one of these sections before being sent for re-processing.

Three methods can be used to remove radiation materials from the reactor pool to areas for study by research teams.

Pneumatic "rabbit" loops, similar to the tubes used in some large department stores to make change for customers, deliver materials into the reactor for exposure. The radio-



DURING AN INSPECTION of the reactor, which was officially opened by Canadian Prime Minister John Diefenbaker, W. Ross Strike, Hydro's first vice-chairman and Dr. Richard L. Hearn, former Commission chairman, discuss Hydro's interest in the project.

ONTARIO HYDRO NEWS

active material is then despatched to a laboratory for study. Short-lived radioactive materials may be studied by this method.

Neutrons generated by the reactor can be brought out of the pool through six large aluminum tubes at the bottom. These tubes lead to the beam-port floor, 17 feet below ground level, where experiments with neutrons are carried out.

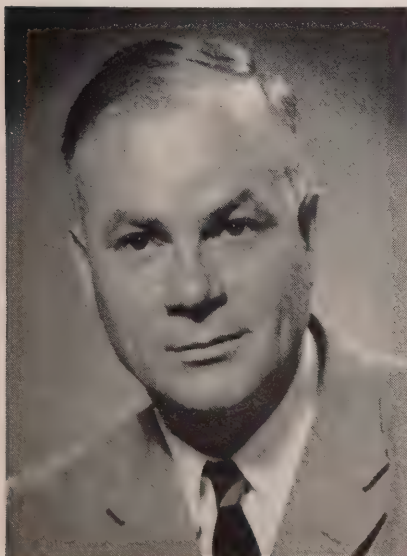
When researchers wish to experiment with neutrons, special concrete shielding is set up around the beam port. A concrete plug is then removed from the port to allow the neutrons access to the outside.

The third and most heavily-shielded system of radioactive material-handling uses remote control techniques. "Hot" materials are moved from the pool through an underwater passage into a "cave" or "hot cell."

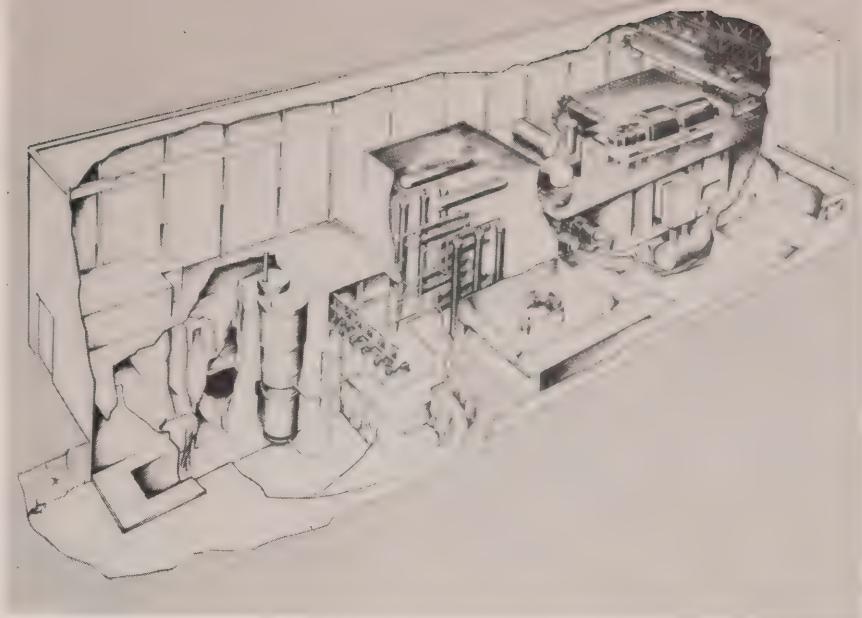
The material is handled by a "master slave" manipulator in an outside room. The operator watches the experiments through a three-foot thick leaded glass window.

McMaster officials say their reac-

(Continued on page 14)



DR. H. G. THODE, McMaster's research director, heads a 10-man operational team, which is responsible for the efficient and safe use of the reactor and all radioactive materials.



ARTIST'S CONCEPTION of an organic-cooled nuclear power station of the OCDRE type. The reactor is on the left, the heat exchangers (centre) with the steam turbine and generator (right).

NEW CANADIAN REACTORS

PLANS for the development of a new type of nuclear reactor which holds the promise of lower capital costs have been announced by Atomic Energy of Canada Limited.

A \$600,000 contract has been awarded to Canadian General Electric Company Limited for the design, study and development of the project, known by the code name OCDRE (Organic Cooled Deuterium Reactor Experiment).

The OCDRE study means that Canadian scientists are now taking two approaches to the problem of developing nuclear-electric power on a competitive basis with electricity produced by coal-burning generating stations.

Efforts to date (including the Nuclear Power Demonstration plant now under construction at Rolph-ton, Ont., as a joint project by AECL, CGE and Ontario Hydro) have been concentrated on reactors fueled by natural uranium using heavy water as both a coolant and a moderator. In OCDRE, an organic liquid will be used as the coolant to transfer heat from the natural uranium fuel to the steam

generators. Heavy water will still be used as the moderator.

AECL has announced that organic coolants appear to offer a means of reducing the high capital costs of nuclear power stations, although fuel costs will likely be higher than in a heavy water-cooled reactor.

"A nuclear power station using an organic coolant might not only prove to be economic for Canadian nuclear power stations in general, but also may prove to be particularly attractive in small and medium-size stations in the more remote districts, including some Arctic areas," a recent AECL announcement revealed.

The organic liquid proposed for the new type of reactor is a mixture of oil-like substances called polyphenyls, which consist of hydrogen and carbon atoms linked together. Organic liquids cost about 40 cents a pound compared to \$28 a pound for heavy water.

Construction of a \$3,000,000 nuclear reactor designed specifically to test fuel arrangements in large nu-

(Continued on page 14)

NEW CANADIAN REACTORS

(Continued from page 13)

clear-electric generating stations has also been announced by Atomic Energy of Canada Limited.

Known as ZED-2, the reactor will be built at Chalk River, Ont., and

station to be operating in Hydro's Southern Ontario System by 1965.

The ZED-2 reactor will be similar in general design to the ZEEP reactor, which started operation at Chalk River in 1945. Its larger size, however, will permit experiments with fuel rods that cannot be per-

tons of graphite, two feet thick, to reflect escaping neutrons back into the fuel region. Eighteen inches of high-densities concrete shielding will surround the graphite wall.

Canada now has 11 nuclear reactors at various stages. Four are in operation at Chalk River; ZEEP (Zero Energy Experimental Pile); NRX (National Research Experimental); NRU (National Research Universal), and PTR (Pool Test Reactor). In addition there is the McMaster reactor (mentioned elsewhere in this issue) as well as a sub-critical reactor at the University of Toronto. Two are under construction: NPD (Nuclear Power Demonstration) and CIR (Canada-India Reactor now being built in India). ZED-2, as indicated above, is expected to go into operation next year; CANDU, also mentioned above, is under development, while OGDRE is in the preliminary design stage. ■

A COMPARISON

	OGDRE ¹	NPD ²
Status	design study to be done by C.G.E.	Under construction near Rolphton, Ontario, as a joint project of C.G.E., A.E.C.L., and Ontario Hydro. To go into operation in 1961 with electrical output of 20,000 kilowatts
Eventual application of the type of plant	possibly general use in large plants—more likely application in small and medium size plants	to be economic, must be in larger sizes (electrical outputs of 200,000 kilowatts or more)
Fuel	uranium oxide (a form of natural uranium)	uranium oxide
Heat transfer medium (coolant)	organic liquids (polyphenyls)	heavy water (D ₂ O—deuterium oxide)
Material surrounding uranium to promote its "burning" (moderator)	heavy water (D ₂ O—deuterium oxide)	heavy water (D ₂ O—deuterium oxide)
Fuel rod container	probably an aluminum alloy	horizontal, zirconium alloy, pressure tubes
Fuel rod sheathing	probably an aluminum alloy	zirconium alloy
Economic comparison	(1) lower capital cost (2) higher fuel cost	

¹ Organic-Cooled, Deuterium-Moderated, Reactor Experiment

² Nuclear Power Demonstration

is scheduled to begin operation early in 1960. It will be used primarily to investigate the physics of fuel for large power reactors such as the CANDU (Canadian Deuterium Uranium) plant now in preliminary design stages at AECL's Nuclear Power Plant Division in Toronto.

Harold Smith, Ontario Hydro's assistant general manager—engineering, is manager of this AECL Division, which is situated at Hydro's A. W. Manby Service Centre. More than a dozen Hydro engineers are working on the project in co-operation with AECL personnel. Present estimates call for a large nuclear

formed in the ZEEP reactor. To speed up experiments, the new reactor also will have remotely operated apparatus for changing fuel rod arrangements.

ZED-2 will be moderated with heavy water and early experiments will use bundles of uranium oxide rods. The core of the reactor will be an aluminum tank, 10 feet in diameter and 11 feet high containing heavy water. The fuel rods are suspended in the tank and the power of the reactor is controlled by changes in the height of the heavy water.

The tank will be sheathed in 70

ATOMS ON THE CAMPUS

(Continued from page 13)

tor is one of the safest in the world. In addition to shielding techniques, an elaborate safety program has been integrated into all phases of construction.

A battery of devices inside the control room on the operating floor keeps a constant watch on all activities within the building and the reactor. The reactor itself is "fail-safe" and self-controlling. Any departure from normal operation automatically triggers the control rods, which drop into the reactor core at the bottom of the pool, shutting it off in a fraction of a second.

The McMaster reactor is under the supervision of Dr. H. G. Thode, director of research at the university. Dr. Thode heads a 10-man operational committee, which is responsible for the efficient and safe use of the reactor and radioactive materials and their by-products. The committee defines the scope of the experiments and the research to be carried out under the terms of the operating license. ■

STEALING THE SCENE



CHATELAINE MODEL, Betty Milne, poses with mural artist, Harold Town, in both photos.



AFTER a spring of vibrant color, cool black and white will be fashionable this summer.

*Hydro's St. Lawrence mural
makes impressive background for
milady's 1959 summer fashions*

ORDINARILY clothes for milady and power developments might conceivably be considered as totally unrelated subjects.

But with world attention focused on the St. Lawrence Seaway and Power Project this season, anything can happen. And it has happened in the pages of the May, 1959 issue of Chatelaine magazine.

The colorful mural in the spacious penthouse of Hydro's Robert H. Saunders—St. Lawrence Generating Station provides a striking background for the magazine's presentation of what the well-dressed woman will be wearing this summer.

Offering further proof of his versatility, Harold Town, the clever young Canadian muralist, who created this spectacular work of art, proved as apt a model as he is an artist. In several of the color and black and white photographs depicting what high fashion decrees for 1959 summer attire, Town supplies the masculine point of view.

Although the big mural (37 by 10 feet) represents, in the artist's own words: "The raw and untrammelled forces of nature gradually controlled and transformed to produce the modern wonders and benefits of electric power," its majestic sweep and brilliant hues yield temporary but complementary precedence to the "cool black and white" of 1959 fashions. ■

Hydro's National Home Show exhibits accent
electricity's revolutionary impact on modern living



TH



NEW IDEAS in color combinations and uses of brick and tile were featured in the model home presented by the Brick and Tile Institute of Ontario at the National Home Show this year.

MAGIC—on stage and in the kitchen—highlighted the Hydro exhibit at the National Home Show in Toronto recently.

One of the magicians was Billy Arnott, who plucked silver dollars, chickens and yards of silk handkerchiefs from the pockets and ears of wide-eyed children. He placed a tumbler of water inside a paper bag, crumpled it up and threw it away. He took a lighted electric bulb from its socket and poured a pint of milk from it.

Alternating as the other magicians on stage, Lois Hurst and Gwyn Reed, of Hydro's Anne Allen Home-maker Service, made their magic with the help of the electronic oven. By way of demonstration, they cooked frozen meatballs in little more than a minute.

The stage show, however, was only part of the Hydro exhibit,



SUCCUMBING to the age-old "step right up, ladies and gentlemen..." a crowd gathers at the Hydro stage to watch Magician Billy Arnott perform. Alternating with him were Hydro's home economists, who made magic with the aid of the electronic oven (background).

DEMONSTRATION KITCHENS are always popular with feminine visitors. Here one of Hydro's home economists, Gwyneth Reed, is discussing the all-electric kitchen with two Toronto ladies, Mrs. Robert Carson (centre) and Mrs. G. E. Hulehey as they toured the exhibit.

MAGIC POWER

which was sponsored jointly by Ontario Hydro and the member utility commissions of O.M.E.A. District 4. Other exhibits included displays of electric home heating, electric hot water heaters and home lighting. In addition, the Electric Service League of Ontario had an exhibit stressing the important advantages of adequate wiring.

A demonstration kitchen, complete with a galaxy of electrical appliances, was another centre of attraction. Although comparatively small, the electric can-opener almost stole the show.

A chicken turning slowly in the roasting portion of the split-level wall oven brought hundreds of "when are you going to take the chicken out?" queries. But the lower portion of this oven, which provides compact baking space, also came in for admiring comment.

Members of both sexes displayed equal enthusiasm for the counter cooking area in another section of the kitchen. Their surprise over the fact that the cooking top had only two elements was soon dissipated by the explanation that a modern "scullery" has an infinite variety of small appliances, obviating the need for greater cooking space. Hydro's homemakers followed this explanation with a well timed demonstration of the thermostatically-controlled cooking units.

Stacked Appliances

Other appliances on display were an automatic washer and dryer — stacked on top of each other to conserve floor space; a frost-free refrigerator, which does not require defrosting, and an under-the-counter dishwasher — complete with a pre-rinse attachment.

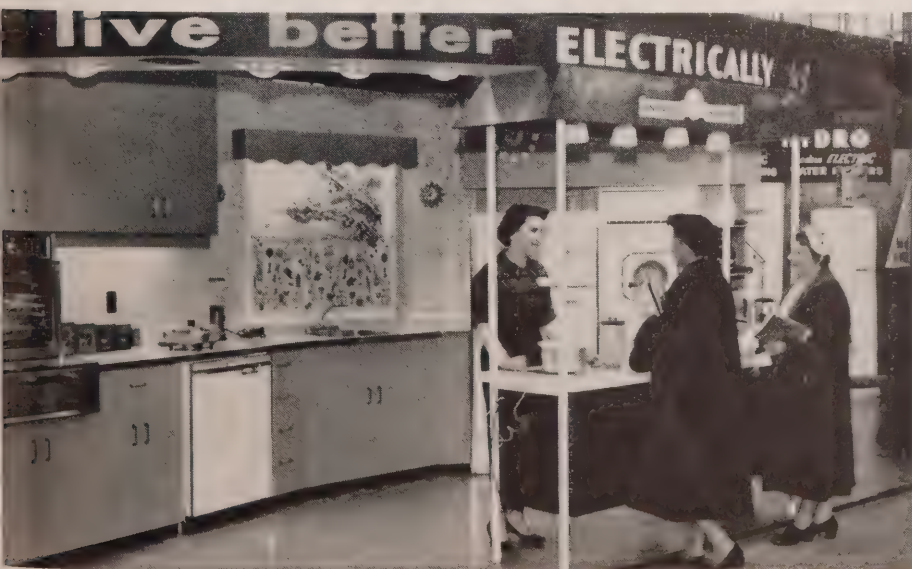
No Home Show could do without a model home. This year's exhibit was the presentation of the Brick and Tile Institute of Ontario, and was specially designed by Architect Paul Meschino to highlight new ideas in the uses and color combinations of brick and tile as well as their conventional applications.

In keeping with the modern trend, the attractive, 73-foot long home, which qualified for a Gold Medallion award, was designed for electric heating installations. Attendants pointed proudly to another advantageous design feature: the living section — consisting of kitchen, family and living rooms—was located entirely on one side of the recessed main entrance. With three bedrooms on the right side, movement through the one-storey dwelling was possible without "tracking" through either the kitchen or living room.

While home interiors and construction received their proper share of the spotlight, the outdoor theme was also accented. More exhibits than ever featured this phase of modern living. Highlight was a large model outdoor living area, including a swimming pool fed by a fresh-water stream; cut-stone walls; outdoor dining facilities; garden lighting and live flowers.

Little wonder then that this year's Show was voted one of the most outstanding events of its type on the continent. Its steady growth is indicated by the quadrupling of exhibitors' space since the first Home Show in 1952, while attendance has jumped from 24,000 in that year to a figure of some 112,000.

—by Joan MacLean





BEFORE: demonstrating the benefits of electricity on the farm, this three-ton truck was a feature of Sir Adam Beck's two "circuses" which toured Ontario around 1912.

SIR ADAM

LIFE's getting easier!

Proof lies in the dusty 1912 records uncovered while comparing photographs of Ontario Hydro's sparkling new demonstration coach and its ancestor, the "Adam Beck Circus," which first rattled down the ruts of concession roads 47 years ago.

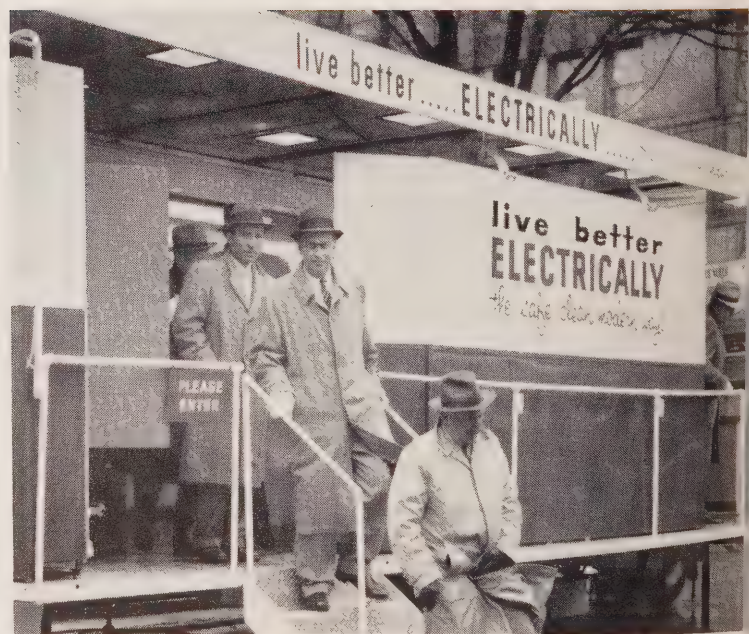
Gone are the hairy-chested days recorded in such laconic comments as:

"Experience in the field showed that wagons with no springs at all would have been preferable . . ."

"One of the transformer wagons, while west of London, skidded on a muddy road and slid down a steep bank, turning completely over before it reached the bottom."

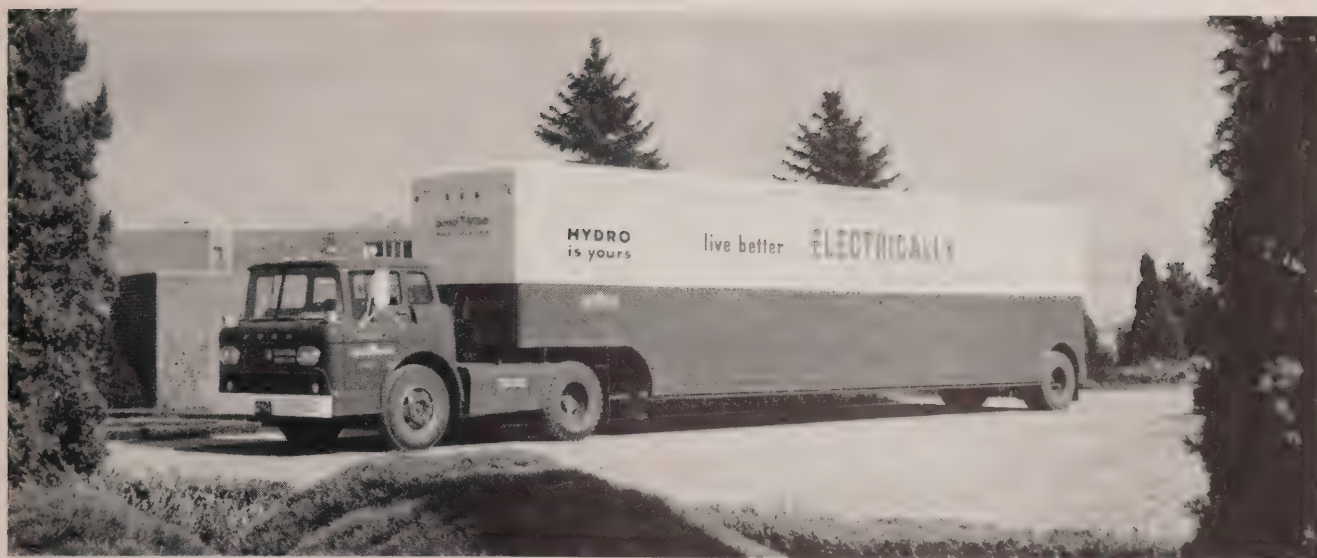
Then there was the time the caravan barely made it over a backroad

(Continued on page 20)



AT A SPECIAL PREVIEW, press representatives and other visitors found that 40 people can inspect displays at one time when the coach's side sections are lowered.

ONTARIO HYDRO NEWS



TODAY, 47 years later, this sparkling demonstration coach is taking to the roads to display the advantages of modern electrical living. Custom-built, the new coach has many unique features.

STARTED IT



ONTARIO HYDRO'S home economists, Lois Hurst (left) and Gwyn Reed, inspect the fixtures and photos, which show special lighting effects in the home.

MAY, 1959



BRIDGET PREUSS, Hydro's Consumer Service Division, looks over the various types of light bulbs on display.



A RESIDENTIAL circuit panel gets the "once-over" from (left to right): Alan Cargill, Montreal press representative; Don Ireland, Ontario Hydro, Toronto Region, and Harold Brownhill, Stamford Township P.U.C., chairman of the A.M.E.U. load promotion committee.



THIS BUILT-IN ELECTRIC OVEN in the demonstration coach wins the approval of A. E. Fahl, Ontario Agricultural College, Guelph (left), and J. W. Huxley, Toronto advertising representative. They're inspecting the rotisserie unit in the kitchen section.

bridge before the whole structure collapsed and floated down a river. Or the scores of times it bogged down in mud and had to be pushed out.

The good old days . . .

But the "circus," hauled first by horses and later by truck, jolted over all obstacles through rural Ontario and played a major role in converting the farmer to electricity through its demonstrations of milkers, threshers, washing machines and other appliances.

Today, electric power is available to 95 per cent of Ontario's farms. The old roads are now well-paved. The spirit of adventure is dimmed. But Hydro expects the new demonstration coach to match its sturdy forerunner's achievements this summer when it begins a tour of fairs, agricultural colleges, schools and other assemblies to display advantages of modern electrical living as an integral unit of the co-operative "Live Better Electrically" program.

Custom-built to the specifications of its Hydro designers, the big red and white trailer has features which are believed unique in Canada.

It is 42 feet long, 8 feet wide and 12 feet high, with a floor space of 250 square feet. When it's parked for a curbside demonstration, about 15 people at a time can walk comfortably through it from an entrance on the right hand side to the rear exit. Because of this arrangement, and because the coach is the standard width, it won't impede traffic.

When more space is available — at fairs, for example — its three side sections can be lowered to form a platform on the driver's side to accommodate an extra 25 people. The telescoping roof slides out seven feet to form a canopy over the platform, which can be separated from the displays for special events.

Standard electrical equipment on display includes a water heater, fly killer, motors, and farm ventilation fan.

In the kitchen section, visitors will find a combination wall refrigerator-freezer, washer-dryer, wall oven, with rotisserie, counter cooking, elements, built-in food centre (mixer, blender, shredded, meat grinder, knife sharpener and juicer) and the latest automatic household appliances.

In addition to wall panels displaying radiant and convection heating, the coach contains an unusually compact electric furnace in a separate compartment. The same compartment houses a flexible public address system and equipment for rear-projection of films or slides on a plastic screen.

The coach also contains four types of lighting and wall illustrations, which, like all the other displays, can be re-arranged through a system of fastening devices and channeling in the walls.

—by J. G. Foster

LIVELY LUMENS DISPENSERS

"LIVELY Lumens Dispensers" was the title jokingly bestowed upon 47 graduates of the Academy of Lighting Arts, a course in residential lighting, who were feted at a dinner and reception held recently in Toronto.

The students were presented with a diploma naming them as Certified Residential Lighting Consultants. Fourteen of the group received tangible awards for high standing in four sections of the course.

This unique course was jointly introduced into Canada by Ontario Hydro, Toronto Hydro and the Canadian Electrical Manufacturers' Association as a part of the continuing "Live Better Electrically" campaign. Written for the layman, the curriculum covered all aspects of residential lighting, including theory, application and merchandising. The most advanced methods of visual education were employed to produce a fast-moving course, with particular emphasis on student participation. Interim tests during the 12-week course and a final examination help to ensure both good attention and attendance. Because classes were limited to 25 students representing manufacturers, architects, lighting consultants, retailers, home magazines and electrical utilities, there were two sessions per week. Participants had to attend at least 10 lectures, held at Ontario Hydro's Head Office in Toronto, to be eligible for graduation.

Described by Howard L. Wright, director and treasurer of C.E.M.A., as "the best piece of visual education I have ever seen," the course was very favorably received by the participants. Words of praise ranging from "extremely interesting" to "terrific" along with comments on the efficient organization of the presentation climaxed the banquet.

The enthusiasm of the enrollees



REPRESENTING the beginning and end of home-planning, Architect Bill Smith and Interior Decorator Valerie Waitzer get together briefly to discuss solutions to a home-lighting problem.



LIGHTING LAYOUTS were one of the projects tackled by students during the course. Judging by Instructor Frank Dean's expression, one pupil has submitted an exceptional example. Looking on are (left to right): J. A. Bateman, Walter Venis, Ross Cresswell and Gerry Shier.

was perhaps best exemplified by Mrs. Valerie Waitzer, an interior decorator, who was one of 11 women on the course. Mrs. Waitzer was so interested that she missed only two sessions when the stork paid her a visit.—by E. A. Johnston.

Waterloo P.U.C. Increases Advertising

Waterloo P.U.C. spent a record \$3,924 on advertising and promotion in 1958. The commission's electric department promotion cost \$804 in 1957.



*Ontario Public Speaking
Contest finals give
youthful orators a
chance to show their*

TALKING

JOHAN CODE is quite sure where he's going: a career in medicine followed by a career in politics, with stardom in the N.H.L. sandwiched in somewhere along the way.

Brian Prescott is just as definite, but a little less demanding of the future: he'll settle for university, then marriage.

Maybe age accounts for the difference in outlook, because John looks ahead as a 12-year-old in Grade 7. Brian is in Grade 12, and he's 23.

But they're alike in two outstanding characteristics — talent and determination. The same qualities were evident, too, in the 40 other students who talked their way up to the finals of the 1959 Ontario Public Speaking Contest — jointly sponsored by Ontario Hydro and Ontario School Trustees' and Rate-payers' Association.

Brian, for example, is picking up education where he once left off, with classmates seven years younger than he is. He came from England to Canada when he was 12, but felt too homesick to go to school. Instead, he worked on the family farm near Brussels, Ont., until a pretty "schoolmarm" persuaded him to go back to school three years ago.

Now he's engaged to the teacher,

bound for college, and crowned champion among all Ontario's secondary school students for impromptu speaking.

Brian's determination is a special kind, of course, but the same sort of drive took all the finalists through county, inter-county and district contests to the finals, held in Toronto, March 31 and April 1, during the Ontario Educational Association's 99th annual convention.

The three judges were unanimous in their opinion that choosing winners had never been more difficult in the contest's 37-year history.

"We feel a little electrified," quipped Philip Hornick, language art consultant to the Toronto Board of Education — a reference to the fact that the young orators had Hydro in Ontario or the varied applications of electricity as their topics.

Walter J. Holsgrove, O.S.T.R.A. chairman, paid warm tribute at the convention to Ontario Hydro's cooperation with his association, the O.E.A.'s trustee branch.

"Ontario Hydro's help enabled us to have thousands more children from across the province participate in this contest," he said. "These are our future citizens, and the more who take part, the better the future should be."

This was the first year that competition was open to secondary as well as elementary school students, and the first year for Hydro participation. About 50,000 kits of background material and reference sources were distributed by the Commission to help students prepare speeches on the benefits of electricity, and the venture was so successful that it will be repeated next year.

Official Congratulations

First Vice-Chairman W. Ross Strike told the finalists he was proud of Hydro's association with the contest.

"Over the years I've heard many so-called good speakers talk a lot more and say a lot less," Mr. Strike added before presenting awards to the winners. "You have all done your homework well — which, I fear, cannot be said of all people who speak from public platforms."

The contest was divided into three divisions: prepared speeches for elementary and secondary school students, five to seven minutes long, and impromptu speeches, which allowed secondary students only half an hour to study a given subject before speaking from three to five minutes.

Winners received cash prizes, cups

W. ROSS STRIKE, Hydro's first vice-chairman, presents the elementary school cup to champion Christine Reilly, Islington, who holds the tiny teddy bear she carried for good luck. Smaller cups, scrolls and prizes went to the boys she edged out: John Code, Perth, 12, and Joseph O'Connor, 13, Hastings.



TALENTS

to be displayed in their schools (a plaque in the impromptu division), smaller cups for themselves, and scrolls of merit. Runners-up received prizes, cups and scrolls. The cash prizes — elementary, \$75 for first place, \$50 for second, \$25 for third; secondary prepared, \$100, \$75 and \$50; secondary impromptu, \$50, \$25, \$15.

The finalists had a chance to talk it up among themselves after the contest and during day-long trips to Niagara Falls, which included tours of Sir Adam Beck-Niagara Generating Station No. 2 as guests of the Commission.

How does it feel to compete against the best young orators in Ontario before an audience of more than 400?

"I wasn't nervous — at least, not very nervous," said Christine Reilly, of Islington, who won the elementary finals.

Then why did she take along the miniature teddy bear that she had

(Continued on page 24)



DETERMINED BRIAN PRESCOTT, who quit school and worked on the family's Listowel district farm six years before resuming studies, displays the large plaque he received for winning the impromptu speaking finals. He is congratulated by Robert Carr, Chatham, who placed second, and Miss Jamie Gill, Belleville, third.



TOP TALKER in the secondary school prepared speech division, Walter Parnaby, 17-year-old Orillia, receives the presentation from Mr. Strike. Richard Wellwood, 17, Chatham (left), was second while Brian McKeown, Hawkesbury, was third.

carried as a mascot when she won over almost 1,800 contestants in the earlier Metropolitan Toronto finals? (Member municipalities of O.M.E.A. District 4 contributed a substantial sum toward the cash prizes in this particular contest). And why tape a silver dollar inside her shoe as well this time?

"I just feel better that way," Chris protested. "It's not that I'm superstitious or anything."

John Code, of Perth (remember — our doctor-cum-politician-cum-hockey star?), was a close, cool second.

"I wasn't a bit nervous," he insisted, shifting from one foot to the other and weaving like a boxer warming up. "I look at it this way: what is an audience anyway? Just people like me."

Joseph O'Connor, of Hastings, who came third, chipped in, "There's nothing to be scared of if you know what you're going to say. I like talking. I guess it's the Irish in me."

One thing you can say about them all. Excited or not, they certainly weren't left speechless.

—by J. G. Foster



△
RELAXING after the strain of the contest, four secondary school finalists are discussing the operation of Hydro's Sir Adam Beck-Niagara Generating Station No. 2 with Harley McCallum, the Commission's educational liaison officer, during a tour of the area.

▽
LEARNING MORE about their common topic, the elementary contestants, with their parents and teachers, pose on the observation platform overlooking the station.





LET'S CHAT

With Gwyneth Reed of Anne Allan's Hydro Homemaker Service



SPRING brings a welcome change in the seasons but there is no seasonal upheaval for the housewife who uses her electrical cleaning servants properly. First, she devises a plan for daily, weekly and occasional cleaning. This allows her to dispose of the dirt before it accumulates. Then she organizes her cleaning equipment and supplies. A "clean-up" closet holds these easily and conveniently. The vacuum and floor polisher fit in neatly with vacuum attachments hanging on a peg-board wall. Supplies may be stored on shelves. Those used most frequently may be kept in a basket to carry from room to room.

The vacuum cleaner is essential because it keeps the house spanking clean from top to bottom. The floor cleaner removes dust and dirt from rugs and carpets. Featherweight wands that fit together with an air-tight lock do all the dusting—floors, furniture, ceilings, walls, drapes. Then disposable paper bags simplify emptying the collected dust.

The electric floor polisher produces beautifully gleaming floors. Some models apply wax, polish and buff simply by changing the pads that fit on to the polishing brushes. The fact that they are light enough to lift to table top level to put a looking glass shine on tables is an added bonus. Also, there are combination scrubber-polishers that wash, wax and polish tile floors.

To simplify cleaning jobs further, outlets spaced conveniently, or wired molding, allow the homemaker to plug in equipment to reach every

nook and cranny in every room.

Today servants are efficient, dependable, tireless. They are electrical servants!



And now for a word about food.

Chocolate—the very word makes the mouth water, conjuring up visions of luscious candy, desserts, beverages.

The Aztec Indians used cocoa to make a drink called "chocolatl" that was served at banquets. It was made from toasted and ground cacao beans mixed with corn meal, vanilla, peppers, spices and herbs and served cold. When Cortez, the Spanish conquistador, invaded Mexico he was served this chilled, bitter beverage by Montezuma. Learning that the cacao beans were used as money by the Indians, Cortez procured some and took them to Europe.

Soon Europeans were experimenting with these beans. Chocolate houses, comparable to the fashionable tea and coffee houses, appeared. People gathered there to chat and to drink the delicious new West Indian drink "Jacollate." Now it is a favorite sweet flavor for almost everyone. Use it in the dessert that climaxes this meal:

Rhubarb Juice

Fried Chicken

Puffed Potatoes in the Half

Shell Asparagus

Jellied Apricot Salad

Tea Biscuits

Choco-Nut-Date Cake Coffee.

CHOCO-NUT-DATE CAKE

1 cup chopped dates

1 cup boiling water

2/3 cup butter

1 cup granulated sugar

1 teaspoon vanilla

2 eggs

1 3/4 cups sifted pastry flour

1 teaspoon baking soda

1/2 teaspoon salt

2 tablespoons cocoa

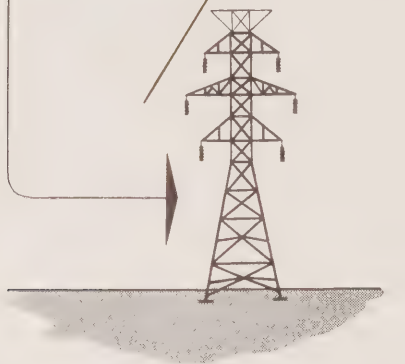
1 cup chopped walnuts

1 package chocolate chips

Combine dates and boiling water and let cool. Cream butter and sugar. Add vanilla. Add eggs one at a time beating after each addition. Sift dry ingredients and add alternately with date mixture. Spread in greased cake pan. Sprinkle top of batter with nuts and chocolate chips. Bake at 350° for 45 minutes.

This cake makes a delicious dessert alone and a swirl of whipped cream makes it special company fare. ■

ALONG HYDRO LINES



No Arrears For Lucknow

Lucknow Hydro System set a new record recently. For the first time since the utility was formed in 1921, both the electric and water departments ended the month with no arrears.

E. H. Agnew, secretary-treasurer of Lucknow Hydro System, who is proud of this accomplishment, has been trying to achieve a month-end with no arrears since he joined the utility in 1928.

Toronto Hydro's Chief Accountant Passes

Toronto Hydro's Chief Accountant, Richard Ross Logan, died unexpectedly in his Woodridge Court home recently.

The 54-year-old chartered accountant was in the Audit Department of the City of Toronto for many years, and on loan to the Department of Munitions and Supply during World War II. He joined Toronto Hydro in 1951. Mr. Logan was Treasurer of the Electric Club in Toronto.



LEADING OFF the discussions which launched the new industry committee on electric heating were (left to right): Gordon McHenry, I. K. Sitzler and W. R. Harmer, Ontario Hydro; Henry Soutar, Windsor; Harold Brownhill, Stamford Twp., A.M.E.U. representatives, and W. L. Scott, Hydro.

ELECTRIC HOME HEATING GETS INDUSTRY SUPPORT

MANUFACTURERS, distributors, contractors and power suppliers agreed unanimously at a conference last month that an industry-wide organization is needed to keep pace with the rapid development of electric home heating.

Electric heating will rapidly become a popular means of achieving more heating comfort in the home. This was the conclusion of the conference sponsored by Ontario Hydro, which brought together all branches of the electrical industry in Ontario.

Thus, a committee, representing all branches of Ontario's electrical heating industry, was appointed to set up an industry-wide organization to ensure high standards of performance and workmanship, and to make electric home heating generally available to the public.

This planning committee will recommend specific responsibilities for each branch of the industry, as well as methods of co-ordinating activities. The committee will include two representatives each from Ontario Hydro (Gordon McHenry, chairman, Ivan Widdifield, with W. L. Scott, recording secretary, and Roy Leadbeater as non-voting members); A.M.E.U. (Harold Brownhill, Stamford Township, and Harold Soutar, Windsor); Canadian Electrical Manufacturers Association (Gordon Marshall, Rexdale, Jack Charlton, Oakville, Bob Houle, Toronto); Canadian Electrical Distributors Association (Grant Carson, Peter Parker and Roy Ellerker, Toronto, Howard Daniels, St. Catharines), while Angus Graham, Toronto, and W. J. Crocker, Port Credit, will represent the insulation manufacturers.

Hydro Purchases Pickering Land

Two adjacent parcels of land, located on the shore of Lake Ontario between Frenchman's Bay and Pickering Beach, were purchased recently by Ontario Hydro.

The land will be reserved as the site of a future thermal generating station and its purchase is part of a long-range program of acquiring land close to a water supply for further thermal plants to be built as required.

The Commission purchased ap-

proximately 26.4 acres with a lake shore frontage of 2,336 feet, contained in Lots 21 and 22, in the Township of Pickering. The transaction also included purchase of 80 acres contained in Lots 19 and 20.

Toronto Employee Dies

Samuel J. Smyth, 64, died recently after serving with the Toronto Hydro System for 44 years. He was assistant executive in the Service Order Department at the time of his death.

Announce Consumer Service Appointments

I. K. Sitzer, director of Ontario Hydro's Consumer Service Division, has announced the appointments of E. G. Bainbridge as Municipal Service Engineer and of J. B. MacDonald as Rate Study Engineer.

Mr. Bainbridge, formerly assistant rural service engineer at Head Office, has been associated with the Commission for 20 years. In 1938 and 1939 he served during the summer months, joining the staff as a junior engineer in 1940. Subsequently he became an assistant rural superintendent, and later an assistant engineer with the Consumer Service Division. For several years he was a Consumer Service Superintendent in the Eastern Region.

Born in Winnipeg, Man., in 1917, he attended public and high schools in Toronto. In 1942, two years after graduation in electrical engineering from the University of Toronto, he enlisted in the Royal Canadian Signals Corp, resigning in November, 1945, with the rank of Captain.

He is a member of the Association of Professional Engineers of Ontario and of the Electric Club of Toronto and a Past President of West Ottawa Lions Club.

Mr. MacDonald, who has been appointed Rate Study Engineer, has had a wide range of Hydro experience. Since he joined the Commission in 1948, he has been associated with the Research and Consumer Service Divisions in several responsible capacities. Prior to his recent appointment he underwent a short training period with the Toronto Region before undertaking a special assignment relating to the Commission's expanded electric water heating program.

Born at Neepawa, Man., in 1916, Mr. MacDonald attended public and high schools there. He graduated from the University of Manitoba in electrical engineering, and subsequently served as a demonstrator in electrical engineering at that university. During the Second World



E. G. BAINBRIDGE



J. B. MacDONALD

War he served for 5½ years in the Signals Branch of the R.C.A.F. and later held positions with several organizations before joining the staff of the Commission.

He is a member of the Association of Professional Engineers and lists golf, tennis, chess and community activities among his hobbies.

The Consumer Service Division has also announced the appointment of G. R. Currie and M. R. Pask as Rural Service Superintendents, while D. H. Cliff has been named as a Municipal Service Superintendent. ■

Avonmore Favors Local Hydro System

Avonmore ratepayers recently voted decisively in favor of purchasing, from Ontario Hydro, the electrical distribution facilities within the boundaries of the police village. It is expected that Avonmore will become Hydro's 353rd contract municipality on July 1, 1959.

Former Manager Passes

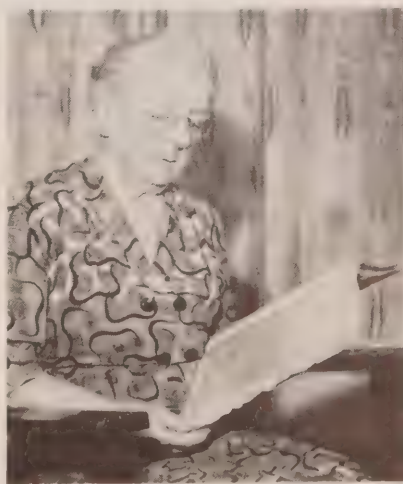
Norman Livingstone Mahaffy, manager of Port Elgin Hydro System from 1931 to 1952, died recently in Saugeen Memorial Hospital, Port Elgin. He was 81 years old.

Mrs. D. B. Detweiler Dies at Kitchener

Mrs. S. Adelaide Detweiler, widow of Daniel B. Detweiler, the famed member of the "Committee of One" who played an outstanding role in the early stages of the movement that led ultimately to the formation of Ontario Hydro, died a few weeks ago at her home in Kitchener.

Mrs. Detweiler was born December 14, 1868, near Vineland, Ont. She was a life member of the Women's Christian Temperance Union and the Travellers' Aid Society.

Survivors include three sons: George F. and W. Arthur, Los Angeles; J. Russell, and one daughter, Mrs. Bertha MacLean, both of Toronto.



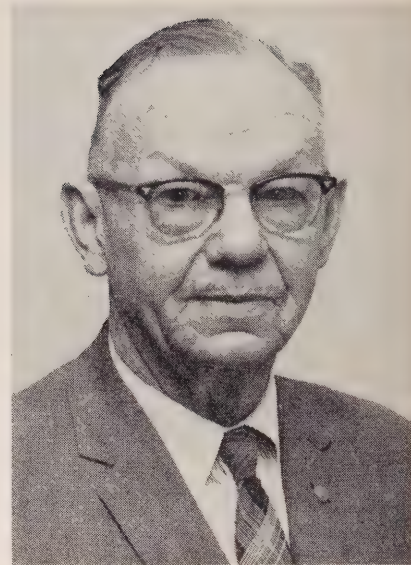
MRS. D. B. DETWEILER



CHARLES FIFE



ALEX KEMP



THOMAS SCOTT

EXTEND SCOPE OF WIRING PROGRAM

APPPOINTMENT of three new field representatives as part of a campaign to co-ordinate and extend the scope of the adequate wiring program throughout Southern Ontario has been announced by Manager Harry Foy of the Electric Service League of Ontario.

"In view of the growing number of electrical appliances available to domestic Hydro customers and the increasing popularity of electric home heating in this province, members of the Electric Service League of Ontario have unanimously agreed that it should take immediate steps to broaden its activities to cover as much of the province as possible," Mr. Foy stated in announcing the names of the new field representatives.

Under the plans for program expansion, Charles Fife, of Guelph, will be located in Ottawa to represent the League in the eastern section of Ontario. Thomas A. Scott, with headquarters at Hamilton, will co-ordinate promotional work in the Niagara area as well as in other sections of the heavily-populated,

west central portion of the province, while Alex S. Kemp, London, has been assigned to supervise League activities in Southwestern Ontario.

"With these new field representatives available to handle our important work in these particular regions, we are confident that our existing field staff will be able to do a more effective job in the Metro Toronto area, in central Ontario, in the Georgian Bay district, and possibly expand our operations in Northeastern Ontario," Mr. Foy continued.

Long-range plans call for the eventual establishment of seven regional offices, the boundaries of each region roughly conforming with those created by Ontario Hydro in 1947.

One of the primary responsibilities of the expanded Electric Service League staff will be the formation of new chapters or branches of the League in all the major centres within their respective areas of operation. The membership of these new local organizations will consist of representatives of all segments of

the electrical industry, including electrical utility and manufacturing officials, as well as electrical contractors, wholesalers and appliance and equipment dealers.

Former Ottawa Superintendent Passes

A superintendent with the Ottawa Hydro Commission for many years, Claude B. Bradshaw, 58, died in hospital recently following a short illness. He had retired in 1957. Mr. Bradshaw served with the Ottawa Light, Heat and Power Company for some years prior to joining the utility staff.

Chesterville Names New Clerk-Treasurer

Chesterville Village Council has appointed Lorne Marcellus to the post of Clerk-Treasurer, as well as Secretary of the local Hydro system. He succeeds H. C. Hummel who is retiring. The council also approved hiring of Charles Marcell on a part-time basis to be on call as a Hydro maintenance man.

SILENTLY IT SERVES

(Continued from page 6)

weighs anything from a tomato to a truck with great accuracy.

Nor is there any sign of an end to our use of electricity. Since 1945, in Toronto and Leaside, for instance, the area covered by Toronto Hydro, the use of electricity has more than doubled, from 1,461,000,000 kw-hrs used in 1945 to 2.9 billion kw-hrs in 1958.

Experts predict that our use will still further increase and that Toronto, bright as it is, and cram-full of electric machines as it is, will use far more electricity in the future.

The new office buildings, for instance, are more brightly illuminated than the old ones. The new Confederation Life and Imperial Oil Co. Ltd. buildings are ablaze with light. On the average, new offices use $2\frac{1}{2}$ times more electricity than old buildings.

When people work in bright offices they become accustomed to better lighting and tend to carry the idea home. Today, the average Toronto home uses about 1,500 watts but, according to experts, it should be using about 3,000 watts to be properly illuminated.

Lifting Brain Load

In the last few years in Canada, electricity has taken on perhaps the toughest of all its jobs: to lighten man's intellectual chores.

Once, dozens of bookkeepers puzzled out payrolls for big companies — a tremendously complex problem with all the necessary deductions for income tax, unemployment insurance, adjustments for overtime pay and raises . . . today, remarkably rapidly, electronic computers (electronic brains in popular parlance) are taking over this work. One new "brain" to open shortly in Toronto will be able to compute a 10,000-man payroll in an hour, making all the correct adjustments and issuing cheques, neatly typed out at the end of the process.

CALENDAR OF EVENTS

SEVERAL organizations associated with the electrical utility field have announced dates for meetings and conferences during 1959. The following events will be of interest to readers of *Ontario Hydro News*:

May 29	A.M.E.U. West Central Region, Brantford;
June 2	Central Ontario Metermen's Association, Orillia;
June 5	A.M.E.U. Toronto Region, King Edward Hotel, Toronto;
June 18-19	A.M.E.U. Eastern Accounting Conference, Gananoque;
June 24	O.M.E.A. District 5, Port Dover;
July 2	O.M.E.A. Presidents and Secretaries, Bigwin Inn;
July 2-4	A.M.E.U. Summer Technical Conference, Bigwin Inn;
July 2	Annual Meeting, Electrical Utilities Safety Association, Bigwin Inn;
Sept. 1-2	Eastern Ontario M.E.A., Gil-Mar Lodge, Lindsay;
Sept. 8-9	Georgian Bay M.E.A., Honey Harbour;
Sept. 16	Grand Valley M.E.A., Galt;
Sept. 21-22	Thunder Bay M.E.A., Sioux Lookout;
Sept. 24-25	A.M.E.U. Western Accounting Conference, Walper House, Kitchener;
Oct. 21	Western Ontario Electric Meter Association, Sarnia;
Nov.	O. M.E.A. District No. 8, Ridgetown.

(Courtesy of the A.M.E.U.)

Of course, the computers can do much more than handle payrolls. They can predict incredibly complicated facts — such as the number of trees likely to grow in a forest or the number of fish to be expected in Lake Ontario. They can work out involved problems of marketing. One in the Post Office at Ottawa has been sorting letters.

At Ontario Hydro's Head Office in Toronto, new electronic computers have been installed to handle customer billing and related figures, as well as the preparation of complex engineering data.

A prominent electrical utility executive recently pointed out that 200 years ago, 80 per cent of the power for man's work was supplied by animals, 15 per cent by human beings and only 5 per cent by machines. Now animals supply but one per cent of our work energy, human

beings only 3 per cent, machines — many operated by electricity — 96 per cent.

Whether it is used to press a man's shirt by electric iron or to figure out a mathematical formula in a giant computer, electricity is the silent servant of the city, unseen and uncomplaining, carrying a workload in an hour that lifts the load of years from men's backs and minds. It lightens their steps, brings leisure to their lives and the opportunity to progress into an increasingly bright future. ■

St. Jacob Names New Executive

John C. Buchanan has been appointed Secretary-Treasurer of the St. Jacobs Hydro-Electric System. He succeeds F. E. Welker, 86, who has retired after 42 years' service.



ONTARIO HYDRO NEWS

JUNE 1959





ONTARIO

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JUNE, 1959

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COVER "SHOTS"

Hatch covers on the generating deck of the St. Lawrence powerhouses are visible through the legs of the 300-ton gantry crane shown on the front cover. A rotor (foreground) for one of the 16 units in Hydro's Robert H. Saunders-St. Lawrence G.S. awaits installation. Her Majesty, Queen Elizabeth II, will unveil a commemorative plaque here on June 27 (see page 2).

Niagara's American Falls forms an unusual background for this view of Ontario's Queen Victoria Park as Misses Shirley Herrington and Ezita Dal Bianco, of Hydro's Niagara Region staff, count some of the wooden nickels used in the recent Blossom Festival celebrations.

HYDRO NEWS

IN THE DRIVER'S SEAT

IN HIS ADDRESS at this year's annual O.M.E.A.-A.M.E.U. meeting, Ontario Hydro Chairman James S. Duncan laid particular stress on the fact that municipal utility representatives are in the most advantageous position to encourage the use of electrical appliances and to promote sales of off-peak energy. Mr. Duncan's remarks also included the suggestion that the 23,000 municipal and Ontario Hydro employees be trained as a unified, electrical sales force.

Certainly the opportunities for effective and imaginative customer relations are almost limitless. Examine for a moment the possibilities inherent in the steady flow of immigration into Canada from other countries in the past decade and more. Since January 1, 1946, more than one million immigrants have come to our country. It is a source of gratification, moreover, that more than 50 per cent of these new Canadians have settled in Ontario. In terms of economic development, this great, post-war wave of immigration has had an invigorating effect on this province as reflected in the thousands of new homes built in Ontario in the past few years. The impact of this increased population and accelerated home construction program has been evident, too, in the soaring residential power demands in many communities.

Many municipal electrical systems, as a result, have found it necessary to make heavy investments in new distribution plant and facilities — \$213 million in the past nine years.

Will municipal utilities get the maximum or even a justifiable return from their investments? Or will they be satisfied to extend their distribution lines to serve merely the barest minimum lighting requirements of new homes?

Many new Canadians, together with their children (plus, of course, hundreds of native Ontario citizens), can safely be classified as potential homebuilders. It's estimated that some 50 to 60 thousand new homes will be built in this Province before the end of 1959 alone. These new homes will be installing heating facilities,

water heaters and cooking ranges, and they'll require thousands of other appliances.

In commenting on the post-war influx of foreign-born population, one Canadian publication recently pointed up the fact that many of our new citizens are initially unfamiliar with the articles and services they see on display and advertised in magazines, newspapers and on television. This does not deter them from sampling them, but characteristically — once disappointed, the new Canadian will seldom give them a second chance. On the other hand, when he is satisfied "his loyalty is assured — he is not a brand-switcher like most native Canadians," the article states.

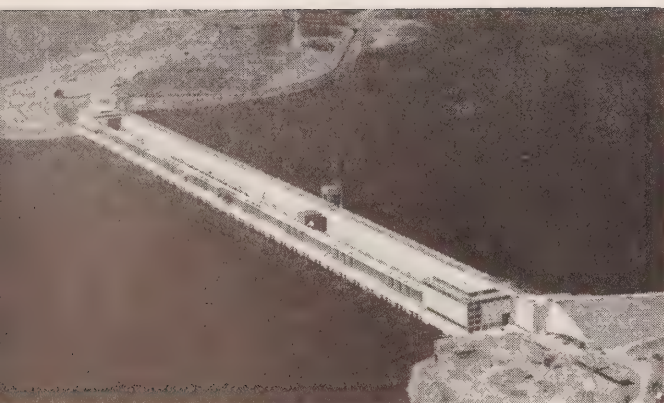
The importance of creating a favorable climate for Hydro service among new Canadians was implicit in an Ontario Hydro decision, earlier this year, to place advertisements in several foreign-language newspapers with circulation embracing the growing ethnic groups in the Province.

In supplementing such an advertising program, municipal utility employees of every category — particularly those staff members with a knowledge of other languages than English — can perform a useful function by contacting those who have come from foreign countries in recent years, and then, in their own language, acquainting these eager new citizens with the countless benefits of electrical living. The employee's job is not finished here, however. It is important that these new customers are assisted in enjoying these benefits. This involves, of course, ready and sympathetic attention to customer complaints. As the article quoted above, points out: Customer satisfaction promotes customer loyalty.

We are confident that the adoption of such broad and forceful and, even more important, consistent programs of customer relations will ensure the complete success of the co-operative "Live Better Electrically" campaign.

Truly those whose daily occupations and leisure hours place them in contact with existing and potential Hydro customers are in the driver's seat.

Royal Visitors



ON June 27 Her Majesty, Queen Elizabeth II, will unveil a commemorative plaque on the tailrace deck of the adjoining powerhouses of the St. Lawrence Power Project.

St. Lawrence Seaway and Power Projects will figure prominently in the schedule of Her Majesty Queen Elizabeth II and Prince Philip during Canadian tour

FROM Newfoundland's rocky coasts to the Pacific-washed shores of British Columbia, Canadians have been making lavish and detailed preparations for the first nation-wide visit of their Queen.

Her Majesty, Elizabeth II, is no stranger to Canadians, however. In 1951, as heir-apparent, she and her husband, H.R.H. the Prince Philip, received a tumultuous welcome during their first visit to Canada. In 1957, as Queen of Canada, she made history by officially opening a session of her Canadian Parliament—the first occasion that a reigning British monarch has personally officiated at such a ceremony.

And now this month, Her Majesty commences her first country-wide tour as Queen, accompanied by Prince Philip. Her visit this year will be invested with fresh significance for she comes, primarily, to officiate with the President of the United States, Dwight D. Eisenhower, at the formal opening of the great St. Lawrence Seaway on June 26.

The eyes of the world have been focused, for several years, on this broad river as machines and engineering skills have created the 2,200-mile waterway that now projects into the heart of the North American Continent. At the same time, similar skills

(Continued on page 4)





IN OCTOBER, 1957, Queen Elizabeth became the first reigning British monarch to personally officiate at the opening of Canada's Parliament. She was accompanied by the Prince Philip.



WHILE THEIR ROYAL PARENTS are touring Canada from coast to coast, Prince Charles and Princess Anne will remain in Britain. This photo was taken beside a lake in Buckingham Palace grounds.

were being exerted in fashioning the sprawling 1,880,000-kilowatt power development in the International Rapids section of the St. Lawrence at Cornwall, Ont.

And it is at this point that Her Majesty will disembark from the Royal Yacht, Britannia, on the morning of June 27 to participate in the unveiling of a plaque surmounted by a 60-foot pylon commemorating the successful taming of the turbulent stream by men of two nations.

Symbolizing the international character of the power development, the Vice-President of the United States, Richard M. Nixon, will greet the Royal visitors as they alight at the Eisenhower Lock for a brief stop on American soil. Shortly thereafter the Royal party, accompanied by the United States hosts, will move out across the Robert H. Moses Power Dam to the international boundary line. Here the powerhouse of the Power Authority of the State of New York adjoins Ontario Hydro's Robert H. Saunders — St. Lawrence Generating Station. And it is on this "frontier of friendship" that the attention of countless North Americans will be centred momentarily as Her Majesty unveils the international plaque that bears witness to the common and peaceful purposes of the two countries.

The ceremony will take place within earshot of the steady hum of 13 massive generators in the 16-unit Ontario Hydro powerhouse and possibly an equal number in its American counterpart, and will climax some five years of fruitful international co-operation and feverish construction activity.

This simple but impressive event will precede a brief reception for the Royal couple, Vice-President and Mrs. Nixon and several other distinguished American guests, at the entrance to the Commission's powerhouse administration building.

Then will follow a short tour of the City of Cornwall, civic greetings and an ovation for Her Majesty from thousands of city and district school children assembled in the municipal Athletic Grounds.

After luncheon, Queen Elizabeth, Prince Philip and other members of the Royal entourage will travel by car along the banks of the St. Lawrence. Escorted by Ontario's Prime Minister, Hon. Leslie M. Frost, Her Majesty will have the opportunity of seeing the new communities created by Ontario Hydro, and of meeting some of the 6,500 Ontario citizens whose homes were moved to make way for the raised waters of the power development.

This portion of the regal tour will conclude at Iroquois later in the afternoon and the Royal party will again board the Royal Yacht, Britannia, for a short cruise to Brockville.

Thus will the great international seaway and power developments reach the triumphant climax for which so many waited so long. ■



SINCE 1954 the sleek Britannia has carried members of the Royal Family on state visits to more than 30 nations.

FIT FOR A QUEEN

H. M. Y. "BRITANNIA" has sailed most of the world's sea lanes. But, as far as can be determined, her Canadian voyage, commencing in mid-June, will be her first long distance freshwater journey — principally, perhaps, because nowhere else in the world could such a feat be achieved by a ship of her draft. When she cruises Ontario waters this summer — up the St. Lawrence River through the Seaway and the Great Lakes to the heart of North America — she will add close to 3,000 fresh-water miles to her proud record of 100,000 miles in the service of the present Royal Family.

H.M.Y. "Britannia" was not built for pleasure cruising. As with the 50-year-old "Victoria and Albert" (which she replaced), the Royal Yacht can quickly and economically be converted into an efficient naval

hospital ship should occasion demand.

Meanwhile her job is to carry members of the Royal Family on State visits to British Commonwealth and other free and friendly nations around the globe. Although this summer's Royal Tour has been widely publicized as informal in nature, it remains within the category of a State visit. Formal programs are being avoided as much as possible, however, so that Her Majesty, Queen Elizabeth II, might enjoy scanning a cross-section of the nation's scenic attractions, resources and economy, meeting her Canadian subjects more casually and learning how they live, work and play.

Built in 1953 by John Brown Company in its famous Clydebank yards, the 5,769-ton "Britannia" is 412 feet long. That she was well

built is evidenced by her numerous successful voyages to far distant lands through all kinds of weather. Her range without refuelling is 2,000 miles at 20 knots per hour.

The complement of H.M.Y. "Britannia" numbers 20 officers and 250 other ranks, every one a volunteer, hand-picked for good conduct and suitability. Shipmates on her Canadian cruise will be two officers and several ratings of the Royal Canadian Navy, who are justifiably proud of the honor.

Since her first voyage to Tobruk in 1954 — when she took Prince Charles and Princess Anne to meet their parents — the sleek ship has conveyed members of the Royal Family on State visits to more than 30 nations. Recently she has been carrying the Prince Philip on a tour of the British Commonwealth countries in the Pacific. When she returns to England with the Royal couple after their six-week tour of Canada by air, rail and water, the historic travel log of H.M.Y. "Britannia" will read close to 110,000 miles. ■

SALES SYMPOS

MUNICIPAL AND ONTARIO HYDRO representatives concentrate as Detroit Edison's Manager of Sales, H. R. Stevenson (standing) explains the functions of key members of his department.



J M



VISITORS WERE WELCOMED by Detroit Edison President Walker Cisler (left). Active in arrangements for the methods conference were Vice-President (Sales) E. O. George, and George Lahodny, assistant manager of sales.



MR. GEORGE listens as Hydro's First Vice-Chairman, W. Ross Strike, acknowledges the U.S. utility's courtesy.



LINKED by transmission lines across the international border, Detroit Edison Company and its senior officials recently proved the effectiveness of the tie with Ontario's Hydro system.

But this time it was power sales not power production that brought representatives of the two electrical agencies together.

Headed by Hydro's First Vice-Chairman W. Ross Strike, O.M.E.A. President Bert Merson and A.M.E.U. Vice-President Harry Hyde, Toronto, a party of some 60 municipal and Ontario Hydro officials, converged on Detroit Edison's headquarters for an intensive, one-day study of the electrical company's comprehensive sales program.

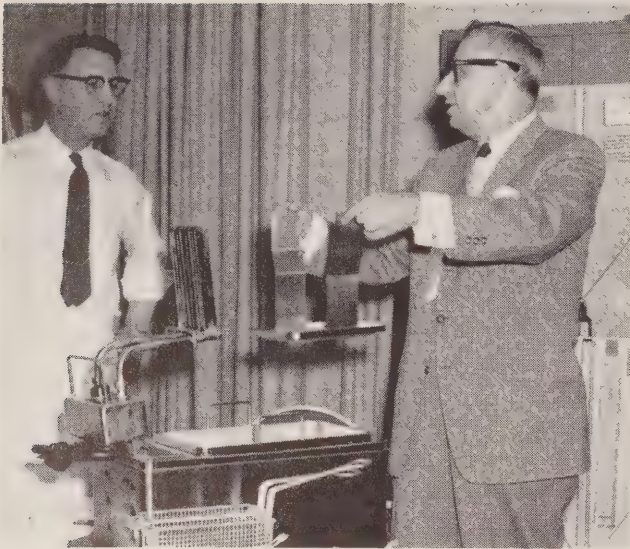
After brief remarks from Mr. Strike and equally brief but cordial welcomes from Detroit Edison's President Walker Cisler and Vice-President E. O. George, the American utility's Manager of Sales, H. R. Stevenson, launched the "crash conference" on sales techniques.

During the morning session the Ontario "students"—including the nucleus of Ontario Hydro's growing Sales Promotion organization—heard a resume of the Detroit company's 1959 and 1958 electric water heater sales program by E. G. Hurley, director of residential sales. Mr. Hurley's remarks were highlighted by the interesting report that Detroit Edison set an objective of 18,000 water heaters for 1958.

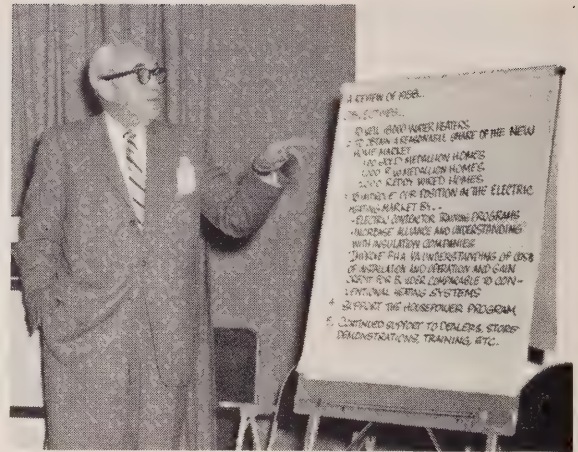
"As October came along, sales projections indicated that we would fall short of that objective."

In putting its "Operation Year-end Sale" into motion, the company borrowed 104 Edison sales staff, right-of-way, advertising staff members and display shopmen from their regular jobs and turned them into door-to-door salesmen. "Their accomplishment with an

(Continued on page 9)



THESE DETROIT EDISON employees demonstrated an effective method of selling electrical cooking equipment, like this deep fryer, to a discerning restaurateur.



AMONG THE PANEL of speakers was J. L. Hurley, the company's director of residential sales, who discussed techniques used in the 1958 sales program and present-year objectives.

(Photos by Detroit Edison Company)



DURING THE NOON RECESS, several visitors inspected the attractive displays in the employees' sales room. Here Hydro's Deputy General Manager, J. M. Hambley (left), and General Manager, A. W. Manby, discuss a display of domestic appliances with Mr. Hurley.



CONGRATULATING Assistant Sales Manager George Lahodny for his part in the conference was Gordon McHenry, Hydro's manager of residential sales (second from left). Looking on: Frank Jannaway, St. Catharines (left), and A.M.E.U. Vice-President Harry Hyde, Toronto.



ABSORBED IN THEIR SUBJECT were these two guests, Donald Ramsay, consumer service engineer, Western Region (left), and O.M.E.A. Vice-President Howard Scheifele, Waterloo.

electric blanket premium was outstanding. A total of 6,754 orders were written in a three-month period," the speaker stated, bringing total water heater sales to 18,143 for the year.

The company's realistic and forthright approach to determined competition was further outlined by L. E. Taylor, director, commercial sales, and S. M. Allen, director of industrial sales.

Then attention was directed to appliance merchandising as Director Paul Baumblatt provided a comprehensive picture of the utility's methods of stimulating staff sales and its relations with other appliance dealers.

Concluding the morning class, the Director of Marketing, L. J. Chapman, presented a review of his department's work in market analysis and evaluation.

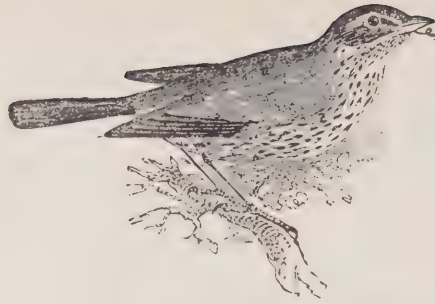
After luncheon in the attractive company auditorium, the Hydro visitors resumed their "desks," and heard a full scale discussion of Detroit Edison Company's advertising program by the director, Paul Penfield. Field organization sales task forces and manpower

requirements were dealt with by G. S. Zilly, while engineering and service problems were the main topics of W. R. Milby, director of customer service, who also provided complete information on customer complaints, their correlation and solution.

A general question-and-answer period found all speakers on the podium and the object of a barrage of queries from the enthusiastic visitors.

The discussions were successfully resolved by George Lahodny, assistant manager of sales, who was complimented on his arrangements for the conference.

After a review of the Edison Electric Institute's 1959 advertising and promotion program by Vice-President George, the appreciation of the Ontario guests was voiced by Mr. Strike. In his remarks, the Hydro Vice-Chairman announced plans for entertaining the Detroit sales force on a visit to an Ontario Hydro project as a reciprocal gesture of thanks. His comments were enthusiastically echoed by Mr. Merson, Mr. Hyde and Ontario Hydro's General Manager A. W. Manby. ■



THE JAU

NEW
GAS TURBINE
HELICOPTER
JOINS
ONTARIO HYDRO
FLEET



HYDRO'S new helicopter can transport loads up to 1,300 lbs. It has a maximum speed of 110 miles an hour.

NTY ALOUETTE

NORTH America's electrical utilities have taken to the air with Ontario Hydro in the vanguard.

Among the first power suppliers on the continent to own and operate its own helicopter fleet, the Commission has established another precedent by acquiring a 110-m.p.h. Alouette II, the world's first production gas turbine 'copter.

Its ability to carry a greater useful load—about $2\frac{1}{2}$ times that of other models used in Hydro operations—qualifies the Alouette for special jobs.

It is expected to save at least \$17,000 a year spraying brush with chemicals to keep transmission lines clear in remote Northern Ontario areas. Although it costs more to operate than Ontario Hydro's other 'copters, it can carry 160 gallons in its two side tanks and spray a greater acreage on one run.

Ferrying heavy equipment to survey sites and other projects will be another important job for the new arrival. With a cargo sling under the fuselage, it can carry loads up to 1,300 pounds.

The French-designed Alouette can seat five people and take off within 60 seconds after its 400-horsepower gas turbine engine starts with a screech like a banshee. (When it first arrived in Toronto, people who heard it coming expected to see a Viscount turbo-jet.)

With this aerial newcomer ready to take over its special assignments, Hydro's six other helicopters are now concentrating on such important tasks as power line patrols, aerial photography, surveys and

line-stringing across gorges and rivers.

Hydro's pilots spend most of their flying time on inspections of about 9,000 miles of high-voltage transmission lines. Aerial inspections are more thorough than those made from the ground, and the helicopters' savings in manpower and equipment have cut the cost of checking lines almost in half. An important aspect of the work is "preventive maintenance" — spotting possible trouble that may be developing.

Ontario Hydro began its helicopter patrols in June, 1949. By the end of 1958, it had patrolled 1,059,200 circuit miles and logged 21,354 flying hours with its well-trained staff of seven pilots, seven air engineers and five observers.

From Malton Airport, near Toronto, and secondary bases at Fort William and North Bay, the helicopters fan out over 12 provincial patrol areas. Out of Malton, they inspect about 6,000 miles of high tension lines in Southern Ontario, flying as far north as North Bay. From there, air patrols take care of inspections of 1,500 miles of lines in Hydro's Northeastern Region, reaching to within 100 miles of James Bay. A similar length of line is patrolled in the Northwestern Region from the Fort William base.

Varying Temperatures

The pilots and observers are intrepid, hard-working men. The northern airmen fly over some of the most difficult territory in the world in temperatures that may vary from more than 100 degrees in the summer to 40-below in winter. They have no rest on a patrol. The pilot



CHIEF HYDRO PILOT, Jim (Blackie) McKaye, applies a little spit and polish to the tail rotor blades of the new Commission machine.

must maintain the helicopter on a steady course in a country notorious for air-current vagaries, while the observer has to keep a constant watch on the lines. Hydro's observers are line foremen with at least a dozen years' experience in transmission line work, coupled with perfect eyesight and keen powers of concentration. These high requirements add up to a perfect team.

The Commission's maintenance standards are severe, too, going beyond factory specifications and Transport Department requirements. In consequence, Hydro's safety record is among the best in the entire helicopter industry. Further precaution is taken for bush-flying (a machine on line patrol may be away

(Continued on page 12)

from its base as long as two weeks) by locating fuel caches in these remote districts.

Helicopters are used extensively in road and survey work, while senior Commission personnel and professional engineers have found them of increasing importance in acquainting themselves rapidly with geographical features of proposed installation sites.

Considerable savings have resulted from the use of 'copters in designing Hydro projects. For example, before construction began on the mammoth Sir Adam Beck-Niagara Station No. 2 at Niagara Falls, helicopters were used to make hazardous soundings above the cataracts. The

findings were incorporated in models that were used to save more than \$5,000,000 in the design and construction of the development. Similarly, helicopters were used in survey work for the St. Lawrence Power Project and in planning the model communities to replace the existing sites subsequently flooded out by the development.

When water levels must be checked at relatively inaccessible water storage areas, it may take a man several days to get to and from the dam through bush country on foot. With a helicopter he could do the same job in a fraction of the time.

Hydro's helicopters, too, have per-

formed many mercy missions, flying sick and injured men from isolated camps to urban hospitals.

Solve Construction Problems

The whirlybirds have solved construction problems that seemed almost insoluble. It was necessary in 1954 to carry a line 600 yards over the broken ice of Puslinch Lake near Galt. A helicopter attached a light nylon "leader" to a heavier rope, which, in turn, was attached to the weighty transmission line. Then the 'copter simply hedgehopped the line across the lake. This technique has been repeated over rough and rapid water on the Trent and Niagara rivers.

In April, 1954, Ontario Hydro



◁ ALTHOUGH it's almost the same size as Hydro's other 'copters, this aerial newcomer can carry five instead of two passengers for distances of about 125 miles.



◁ WITH ADVICE from McKaye, another Hydro helicopter pilot, Ken Wallingford, inspects the instrument panel of the Alouette. Within a minute after the engine starts, the new helicopter can soar aloft at approximately 1,000 feet a minute.

ONE OF the Alouette's most important jobs will be chemical brush-spraying along rights-of-way in northern districts. ▷

co-operated with Trans-Canada Airlines on a Canadian aviation first. Hydro employees building the Manitou Falls Generating Station on the English River were isolated by the spring ice-break. To provide the utmost protection, a Hydro helicopter was dispatched to the site from the Lakehead. Another was dismantled, flown from Malton to Fort William in a Bristol "Flying Boxcar" (an operation that took 5½ hours instead of the helicopter flying time of 5½ days) and there re-assembled. This helicopter took over line patrol duties, replacing the one assigned to Manitou Falls.

In times of emergency, Ontario Hydro helicopters stand ready to assist as a public service. They have

taken part in forest fire-fighting, air searches, rescue operations and even gang-busting. Toronto police called on a Hydro 'copter for help in cornering the notorious Boyd gang of bank robbers north of the city in 1952. Hovering over the gang's hideaway, the helicopter directed converging police cruisers by radio. Police officials said the helicopter had made the gang's roundup possible.

The fleet's greatest trial came in the fall of 1954, when Hurricane Hazel unleashed death and destruction on the Metropolitan Toronto area. Three Hydro helicopters rescued at least 100 men, women and children, often making dangerous rooftop landings on houses isolated by the storm and floods. For two weeks they continued search operations, flood patrol and aerial assistance to traffic control.

In their careers of public service, Hydro's pilots cover the Province ■

New Substation Replaces 1910 Model

Kitchener P.U.C. is replacing its oldest substation—put into operation in 1910—with a new brick substation constructed last year.

It will retain the name of Number 1 Substation and will complete a chain of 14 substations supplying power to interlocking sections of the city. Rudolph Senyshen, the utility's chief engineer, estimates that the new substation will be completed this summer.

Sarnia Man Heads A.M.E.U. Western Region

H. A. Luckins, Sarnia, was recently elected President of the A.M.E.U. Western Region. Other officers named were: A. L. Furanna, London, vice-president; S. C. Webster, Tillsonburg, provincial director; Glenn Sanderson, Woodstock; C. V. MacLachlan, Ingersoll; D. H. Pope, Sandwich West; E. A. Laforet, Tecumseh, directors, and E. H. Ells, Ontario Hydro, London, secretary-treasurer.

COMMONWEALTH'S LARGEST

THE capacity of Canada's largest thermal-electric plant was increased by 50 per cent on May 27 when a giant new 200,000-kilowatt unit was brought into service at Ontario Hydro's Richard L. Hearn Generating Station, in Toronto. Three additional units of similar size are now being installed so that the Hearn plant will have a total capacity of 1,200,000 kilowatts by 1960. The first of these is scheduled for service late this year.

Four, 100,000-kilowatt units have been in operation at this coal-fired plant since 1953. The new steam generating unit, which includes the boiler, is the largest in the British Commonwealth. It towers to a height of 175 feet and waste gases are discharged through a chimney 200 feet high. As is the case for the first units, special electrical and mechanical equipment was installed to remove dust from the discharge in accordance with Toronto's smoke abatement by-law.

When all eight units are operating at capacity the plant will require (every five minutes for cooling purposes) more than 3,000,000 gallons of water, which will be purified and returned to Lake Ontario.

Filtration Plant Installs Electric Heating Units

A water filtration plant with electric heating facilities — believed to be Ontario's first — is being installed by Riverside-Tecumseh Joint Waterworks Board. The plant is scheduled for operation later this year.

Electric heating is being installed by domestic and commercial customers in Ontario and by industry in Quebec. However, the new filtration plant will be the first major installation of its type in Ontario, the board believes.



GARDENING

Unique Niagara School is

the only one of

its kind in North America

IN today's society, any man, woman or child with access to a trowel, a few seeds and a bushel of soil seems to qualify for the title of gardener. While aspirants to the title are as thick as the spring crop of dandelions, they span the spectrum in training and experience from the full-time professional to the apartment dweller who presides over a lonely pot of geraniums.

High up in the earthy aristocracy are the graduates of the Niagara Parks School of Gardening. A glance at the three-year curriculum of this unique institution is enough to deflate a bumptious amateur.

During the first year, students are required to cope with the mysteries of botanical nomenclature, floriculture, landscaping, mathematics for gardeners and the numerous theories associated with budding, grafting, pruning, transplanting and harvesting. Among the second-year subjects are plant pathology, arboriculture, soil chemistry and a study of the chemical and biological methods of insect controls. The final term includes plant breeding, plant classifi-



THIS GARDENING STUDENT is as busy as a bee, cross-pollinating gladioli to create a new variety as part of his practical training.

ONTARIO HYDRO NEWS

GRADUATES

BY DON WRIGHT

cation, entomology, surveying and an extensive written thesis on a topic of practical importance to the gardener.

Floriculture, landscape art and plant identification are studied throughout the course. English is emphasized because the students are in great demand as speakers. They are also required to make oral presentations at school assemblies in preparation for the perils of the public platform.

Formal lectures generally take place during the winter months. They are liberally supplemented with practical sessions in the greenhouses maintained by the Parks Commission. The 15,000 square-foot area under glass is used to propagate the vast quantities of perennials and other plants set out in the parks each spring. Rare blooms from all over the world are also grown and displayed here, along with the choicest native specimens, so that the students can practise the fundamentals of greenhouse work under ideal conditions.

In the spring months, the students exchange their classrooms for

the lush beauty of the school grounds where their efforts with the rake, hoe, spade and clippers have transformed 150 acres of once drab farmland into a showcase of the gardener's art. Located on Niagara Boulevard, about five miles downstream from the Falls, the school attracts thousands of visitors each year.

Emphasis on Callouses

The emphasis is on callouses from April to October when the students perform the hard and varied work required to maintain and enhance the grounds. This includes the care of lawns, gardens, hedges, trees and

shrubbery, as well as the design and building of patios, pools, fences, paths and other types of garden construction.

The school is an integral part of the Niagara Parks system. While the students are only responsible for maintaining their own grounds, they have more than 3,000 acres of magnificent park land in which to study the fundamentals of their craft.

Located in one of the extreme southern portions of Canada, and generously humidified by the spray from the Falls, the park area enjoys climatic conditions regarded as

(Continued on page 16)



IN THE SPACIOUS GROUNDS around the school, this young undergraduate is collecting snapdragon seeds for another planting.



BOOKS AND FORMAL LECTURES are the order of the day during the winter months in preparation for the stiff spring and mid-term examinations.

extremely favorable to plant growth. Few other parts of the North American Continent have so many indigenous species of flowers, and a great number of ornamental types have been introduced over the years. This wide range of flora is invaluable to the students who must be familiar with thousands of plants and their habits.

The Niagara Parks Commission was established in 1885 to restore and preserve the scenery in the immediate vicinity of the Falls. Since that time its jurisdiction has been increased successively until it now maintains a 35-mile strip of land bordering the Niagara River from Fort Erie to Niagara-on-the-Lake.

As the size and scope of the Commission's operations were increased, it became a problem to obtain employees trained in horticulture and

possessing the necessary degree of gardening skill. To meet this need, the School of Gardening was established in 1936. Although the original goal has been achieved, the school has been continued as a public service in making trained horticulturists available to other Canadian communities.

Unique in North America

While there are similar training systems in Europe, the Niagara Parks School of Gardening is the only educational institution of its kind in North America. High school graduation is the minimum entrance requirement, and the eight students, normally admitted each year, must have two other qualifications: good health and single blessedness.

Expense-wise, the fledgling gardener has it all over the university

student. He has no tuition to pay (room and board are provided in a comfortable old colonial style farmhouse-residence), and he receives a small weekly salary. On the other hand, the gardening student works from 8:00 a.m. to 5 p.m., five days a week, and three of his four weeks' annual vacation are in the wintertime. His reward is a much-prized and widely-recognized diploma in gardening.

However handsomely our universities may contribute to the arts and sciences, no alumni have done more to beautify the surroundings in which thousands work and play than the graduates of the School of Gardening. While many have entered the employment of the Niagara Parks Commission, the majority have obtained responsible positions with commercial and government agen-



EVEN THE DOG pays attention as Superintendent Charles Henning (centre) explains the proper method of setting out boxwood cuttings in a cold frame.

PRACTICE takes precedence over theory during the summer for it requires hard work plus knowledge to maintain the school grounds as a showcase of the gardener's art. This pupil is dusting roses against insects.



cies. Some have set up their own nursery and landscaping businesses; several work for major industrial concerns, and others are employed with greenhouses, golf courses, cemeteries and private estates. A convention of park superintendents from various parts of Canada would be tantamount to an "old boys" reunion for graduates of this novel school.

Each candidate accepted by the Niagara Parks School of Gardening must sign an indenture binding him to the Commission "to learn the Art, Trade or Mystery of a Gardener after the manner of an apprentice." Insofar as man is capable, the "mystery" of nature is dispelled as the course progresses, but perhaps it is significant that some four per cent of the graduates have later entered the Christian ministry. ■

THESE VISITORS are enjoying an Easter flower show at the Niagara Parks conservatory where the students are trained in every phase of greenhouse work. The great number and variety of plants required for the parks system are propagated in this well-known conservatory.





LET'S CHAT

with Lois Hurst of Ontario Hydro's Homemakers' Service



The month of weddings is here. Just as April brings rain showers, June brings bridal showers.

When it comes to wedding, anniversary and graduation gifts, don't be stumped. There is nothing more acceptable than electrical appliances. It's a happy thought sometimes to give a gift that is useful but not exactly a necessity. Electric kettles, irons and toasters have come to be necessities in the modern household and would probably be purchased anyway. There is such a variety of other new appliances you can find that contribute to better living — electrically.

An electric frypan with heat control is certainly a convenience. You can plug it in anywhere, be it kitchen, dining room, patio or cottage, provided there is an accessible outlet. The electric saucepan has a similar control, and is perfect for simmering, boiling, baking or deep fat frying.

An electric blender is another good gift idea. In just minutes you can whizz up soups, sauces, salad dressings, dips and drinks. It is a fast way, too, to make bread crumbs for stuffings, even with fresh bread. Blenders come as self-contained units or as attachments to some kitchen mixers.

Light portable mixers and automatic coffeemakers are favorite gifts. For the gourmet, an electric coffee grinder assures freshly ground coffee. Electrically-heated trays keep hot food hot on buffet

tables. And then, for the person who has everything, there is always the electric can-opener, surely the ultimate in luxury!

So many automatic electric helpers are welcome in any modern home, but all too often there is little room to store them. When designing a new kitchen or remodelling, plan to place them so that they may be reached easily. One very good idea is the storage cabinet pictured on this page. It



(Photo by Sunbeam Corporation)

has pull-out shelves and a cord rack on the door. The appliance plug-in panel over the counter top is wired to take six appliances at a time, with a timer on one outlet. However, it is not difficult to install sliding shelves in existing cupboards. Adequate wiring in any kitchen should provide at least two circuits with outlets at convenient spots, wherever the appliances will be used.

June entertaining is a pleasure.

"Then, if ever, come perfect days." Fresh fruit and vegetables appear on the market. Perhaps you are planning a luncheon in honor of a bride-to-be or a girl who is graduating from college or nursing. Here are some suggestions for a festive luncheon on a warm, sunny June day.

Strawberry Juice Appetizer
Chicken Salad with Almonds
Fresh Asparagus Tips Vinaigrette
Fresh Pineapple Twists
Tomato Slices Water Cress
Hot Tiny Rolls
Rhubarb Sherbet in Vanilla
Ice Cream Nests
Fresh Strawberries
Nanaimo Bars
Lemon Tartlets

Nanaimo Bars

Base

Melt $\frac{1}{2}$ cup butter. Blend in $\frac{1}{4}$ cup sugar, $\frac{1}{3}$ cup cocoa, 1 teaspoon vanilla, 1 egg, 2 cups graham wafer crumbs, 1 cup desiccated cocoanut, $\frac{1}{2}$ cup chopped walnuts. Press into 9" square pan.

Filling

Cream $\frac{1}{4}$ cup butter. Blend in 2 tablespoons vanilla instant pudding powder, 3 tablespoons milk and 2 cups sifted icing sugar. Spread over crumb mixture. Chill until somewhat firm.

Topping

Melt 3 oz. semi-sweet chocolate and 1 tablespoon butter. Spread over filling. Chill. Cut into bars. Keep chilled until ready to serve. Makes 32 bars.

EXECUTIVE

APPOINTMENTS

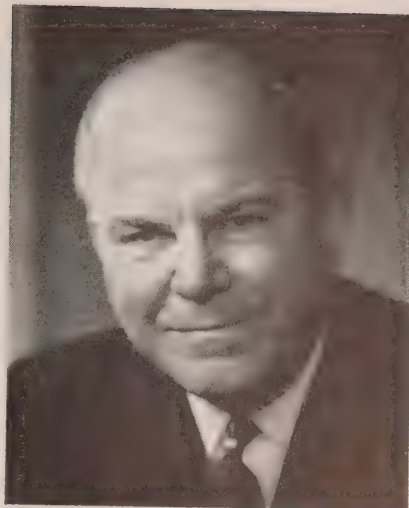
APPPOINTMENT of J. Mervyn Hambley to the post of Deputy General Manager and I. K. Sitzer to the post of Assistant General Manager — Production and Sales — has been announced by Ontario Hydro.

As Deputy General Manager, Mr. Hambley will keep in close touch with all phases of the Commission's operations and will assist the General Manager in overall administration, with special emphasis on administration of Ontario Hydro's nine regions and the completion of the frequency standardization program.

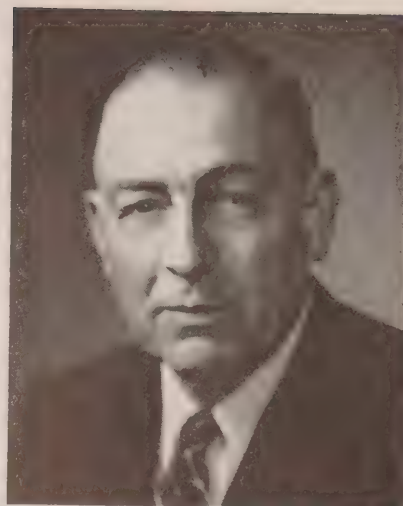
In his capacity as Assistant General Manager—Production and Sales, Mr. Sitzer will assume responsibility for power production, customer relations and sales promotion, all of which were formerly the responsibility of the Assistant General Manager—Administration, a position which now disappears.

Mr. Hambley, 54, is a graduate of Queen's University in electrical engineering. Following graduation he spent one year on the General Electric Test Course and entered the service of the Commission in 1930. In the ensuing years he occupied a number of senior positions in the Operating Department, and in 1947 was appointed Director of the Operations Division. In 1955 he was appointed Assistant General Manager — Administration. He is a member of the Association of Professional Engineers of Ontario, the American Institute of Electrical Engineers, the Electric Club of Toronto and the Board of Trade of Metropolitan Toronto.

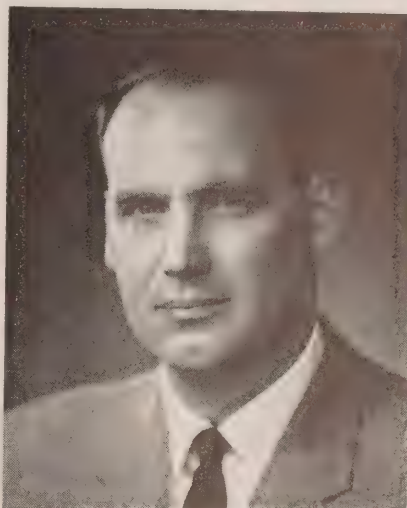
Mr. Sitzer, 59, is a graduate of the University of Toronto in electrical engineering. Entering the service of the Commission in 1927, he



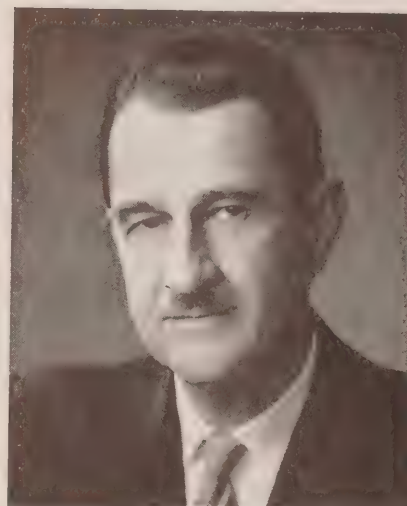
J. M. HAMBLEY



I. K. SITZER



D. J. GORDON



W. R. HARMER

was closely associated with the work of the former Municipal Department of the Commission, and in 1947 was appointed Industrial Service Engineer in the Consumer Service Division. In 1951 he was appointed Assistant Director of the Consumer Service Division and Director of that division in 1953. A member of the Association of Professional Engineers of Ontario, he is well known throughout the electrical industry. He is Vice-President of the Electric Service League of Ontario, a member of the Electric Club of Toronto and an Ontario Hydro representative on the Canadian Electrical Council.

Two other key appointments also have been announced by the Commission. W. Roy Harmer has been named Director of Sales Promotion — a new Ontario Hydro Division (see page 20), while Douglas J. Gordon has been appointed Director of Consumer Service succeeding Mr. Sitzer. The appointment of Mr. Harmer as Manager of Sales Promotion and Mr. Gordon's assumption of the post of Manager of the Consumer Service Department — as part of an earlier re-organization of the Consumer Service Division — was announced a few months ago (see Ontario Hydro News — January, 1959). ■



GORDON McHENRY



IVAN WIDDIFIELD

EXPANSION of Ontario Hydro's Sales Promotion organization to promote the province-wide "Live Better Electrically" campaign is gathering steady momentum.

W. R. Harmer, whose appointment as Director of Sales Promotion is recorded on page 19 of this issue, reports gratifying progress in the creation of an effective sales promotion group.

The Head Office staff will consist of experienced personnel specializing in residential, commercial, industrial and farm sales, supported by specialists in market analysis and sales training. G. M. McHenry has been named manager of residential sales, and I. S. Widdifield is the newly-appointed manager of commercial and industrial sales.

In each of Ontario Hydro's nine regions, sales superintendents have been appointed to provide assistance to the municipal electrical utilities in establishing their own sales organizations and promotional programs, as well as supervise sales activities in Hydro's 103 rural operating areas and maintain liaison with all segments of the electrical industry throughout the province. Now actively serving as regional sales superintendents are: A. M.

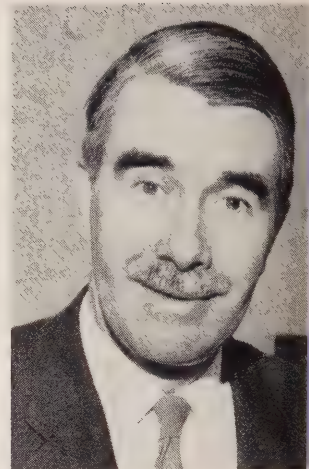
Bizzell, Niagara; J. A. Carty, Northwestern; J. I. Chute, Western; Robert B. Kennedy, Northeastern; Robert C. Loucks, Eastern; Walter H. McMillan, East Central; Hedley C. Palmer, West Central; Gary Pepper, Toronto, and Ronald K. Pile, Georgian Bay.

G. M. McHENRY

Mr. McHenry has assumed his new position with a broad background of sales and technical experience in the electrical field. From 1940 to 1948 he was associated with the design engineering and apparatus sales staffs of Canadian General Electric Company Ltd. For the past 11 years he has held several responsible positions with the Commission, including senior assistant transformation distribution engineer in the System Planning Department; area planning engineer with the Frequency Standardization Division and latterly consumer service engineer in the Western Region.

Born in Toronto in 1917, he is a son of M. J. McHenry, formerly Director of Consumer Service. A graduate of the University of Toronto in electrical engineering, Mr. McHenry has been an active and prominent member of the Associa-

SALE



A. M. BIZZELL

tion of Professional Engineers of Ontario, as well as the Engineering Institute of Canada and the American Institute of Electrical Engineers. Married, he is the father of three boys and two girls.

I. S. WIDDIFIELD

In his new capacity as Manager of Commercial and Industrial Sales, Mr. Widdifield can draw on a wide knowledge of engineering techniques and industrial operations. After graduation from Queen's University in 1935, he became assistant plant superintendent with the Norton Company at Chippawa, Ont. During World War II he served as electrical superintendent of General Engineering Company, an important Scarborough Township war industry. In 1945 he joined the Ontario Hydro staff, and subsequently served with the Consumer Service Division. In 1948 he transferred to the Frequency Standardization Division as a negotiations engineer and latterly as as-

ORGANIZATION EXPANDS



J. A. CARTY



JOHN I. CHUTE



ROBERT KENNEDY

sistant consumer service engineer. Since rejoining the Consumer Service Division staff last year, he has been identified with studies relating to electric heating installations throughout Ontario. A member of the Association of Professional Engineers of Ontario and the Engineering Institute of Canada, Mr. Widdifield is married with three daughters.

Other Appointments

N. J. Lake, formerly survey engineer in the Industrial Service Department, has been named industrial sales officer under Mr. Widdifield, while the Lighting and Service Section under J. I. Thompson, has been transferred from the Municipal Service Department to the Commercial and Industrial Sales Department.

A. M. (SANDY) BIZZELL

Mr. Bizzell joined Hydro early in 1947, serving initially in the power lines group at Head Office, and subsequently, in 1949, at London

with the Frequency Standardization Division. During this period, he was responsible, in conjunction with the London P.U.C. engineering staff, for initiating plans for changeover of the municipal system.

In April, 1951, he became liaison engineer in Niagara Region and was responsible for the standardization program in that region. His new appointment means that this capable engineer will continue to serve in Niagara Region.

Born in the United Kingdom, Mr. Bizzell served before the war as deputy engineer and deputy manager with a group of electricity supply authorities in southwest England after his training with the Metropolitan Electricity Supply Authority in London and environs.

He came to Canada in 1946 following six years of service as an Admiralty Officer (electrical) in the Royal Navy.

Mr. and Mrs. Bizzell, who was a nursing sister in the Royal Cana-

dian Army Medical Corps during World War II, have two sons. The Niagara Region's new sales superintendent is currently Vice-Chairman of the Niagara International Section A.I.E.E. and a member of Lions International.

J. A. CARTY

Born at St. Kitts, British West Indies, Mr. Carty came to Canada in 1941 and enlisted in the Royal Canadian Air Force. He served with the Electrical Branch (air navigation) until demobilized in 1945.

Following his release, he entered the University of Toronto to study electrical engineering and graduated in 1949. In the same year he joined Ontario Hydro and was assigned to Georgian Bay Region. He served as assistant to the Manager of the Barrie Area from 1949 through 1950 and was then appointed as the regional consumer service supervisor. He became consumer service super-

Continued on page 22

intendent, Northwestern Region, in May, 1956, and sales superintendent in January of this year.

JOHN I. CHUTE

John Chute, born and educated in Toronto, graduated from the University of Toronto in mechanical engineering in 1949.

From 1949 to 1950, he was assistant engineer, Mechanical Equipment Section, F.S.D., and later field engineer with this division in the London and Toronto areas.

In 1951, he became assistant engineer, Rural Service Department, Consumer Service Division, at Head Office and served in that post until his appointment as consumer service supervisor in the Western Region in 1954. From 1957 until 1959 he served at the J. Clark Keith G.S. in mechanical maintenance. Earlier this year he became sales superintendent, Western Region.

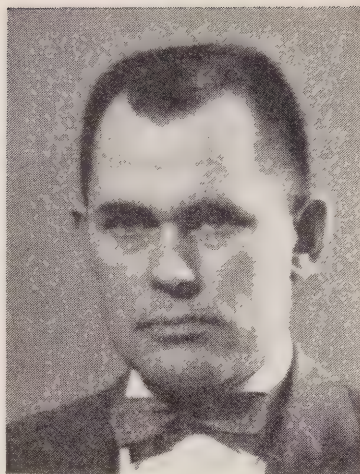
In 1952, John married Gloria Ruth Slinn, at that time a secretary working for Hydro at the A. W. Manby Service Centre. They have two sons, Victor, 5, and William, 3.

ROBERT B. KENNEDY

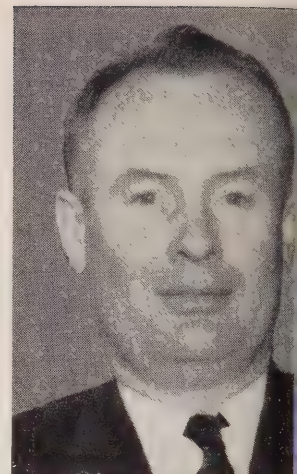
Born in Toronto, Mr. Kennedy received his early education at Lindsay, Ont., before joining the Royal Canadian Air Force as a pilot in 1943. Following the war he enrolled at the University of Toronto, graduating in electrical engineering in 1949.

When he joined Hydro's Frequency Standardization Division upon graduation, he had already spent two summers as a Hydro employee: one as a floorman at Mata-bichuan G.S. and the second as a relief operator at Bare Point T.S.

After serving with the F.S.D. staffs at Sarnia and Toronto, he transferred to the division's planning department in 1953 and, subsequently, to the Personnel Branch as junior engineer training officer in 1954. He moved to the Western Region



ROBERT C. LOUCKS



W. H. McMILLAN

as station maintenance supervisor two years later. He became a sales supervisor in the Consumer Service Division in 1958, and recently became sales superintendent in North-eastern Region.

Bob married Jean Davidson in 1949 and today the couple have three daughters, Patsy, Barbara and Susan.

ROBERT C. LOUCKS

Mr. Loucks joined Hydro following graduation from Queen's University in Kingston where he received his degree in electrical engineering in 1947.

He became associated with Hydro's Eastern Region staff in 1948, and until recently held the post of consumer service superintendent at Ottawa. His new appointment means he will continue to serve with the Eastern Region's Consumer Service Department in the capital city.

Married, Mr. Loucks has three children.

WALTER H. McMILLAN

Mr. McMillan joined Hydro in 1951 following graduation from the

University of Toronto in engineering.

Until May, 1953, he was engaged in frequency standardization work with the advanced program in West Central Region. Since that time he has worked in consumer service capacities in the West Central Region and its Guelph area, returning to the Consumer Service Division at Head Office in September, 1957. His new appointment became effective in March of this year.

Walter, who is married and has two sons, aged 4 and 2, is an ardent sporting enthusiast. He lists skiing, fishing and boating among his favorite spare-time occupations.

HEDLEY C. PALMER

Hedley Palmer was born and grew up on Prince Edward Island, received his early education there and later chose Acadia University at Wolfville, N.S., to continue his studies. He graduated from Acadia with a B.Sc., degree in mathematics and physics in 1946 and two years later obtained his degree in engineering after study at McGill University in Montreal.



HEDLEY C. PALMER



GARY PEPPER



RONALD PILE

In the latter year he joined Hydro in the West Central Region, later transferring to the frequency standardization staff. He served at various locations including London, Windsor, Hamilton, Simcoe and Timmins, holding the post of field planning engineer and later project manager.

In 1958 he rejoined the West Central Region's Consumer Service Department staff, and in February of this year became that region's sales superintendent.

GARY K. F. PEPPER

Born and educated in Toronto. Mr. Pepper is a graduate in Engineering Physics of the University of Toronto. He joined Hydro in 1948 as a member of the Station's Section, Electrical Engineering Department.

In August, 1952, Mr. Pepper was appointed consumer service supervisor in the Toronto Region, being promoted to the position of consumer service superintendent in the same region in May, 1956. He assumed his new post as sales superintendent in January of this year.

Married, with one son, he is an

active Boy Scout worker and is currently district commissioner for some 22 scout groups. He also maintains a close affiliation with his college fraternity, Phi Gamma Delta, and recently served for a term as President of the fraternity's graduate chapter.

RONALD K. PILE

Mr. Pile began his Hydro career as a relief operator at Niagara T.S. during the summer of 1937. During the next three summers, as a student, he served successively on the rural staffs at Markham and Cayuga and also at Eugenia G.S.

From 1940 to 1941, he was an inspector for the Canada Wire and Cable Company. In the summer of 1942, he rejoined Hydro on the station maintenance staff at Sir Adam Beck-Niagara G.S. No. 1 (then called Queenston G.S.).

In 1943 he graduated with a degree in electrical engineering from the University of Toronto. Following 2½ years with the Royal Canadian Electrical and Mechanical Engineers he resumed his association with Hydro in December, 1947, as

assistant engineer in the Municipal Department. In January, 1948, he became consumer service supervisor in the Georgian Bay Region and was promoted to consumer service superintendent in September, 1953. He took over his new post in February of this year.

Married, he has two sons and a daughter. He is an active worker in his church, Collier St. United Church, in Barrie. ■

D. L. Turner Named To A.P.E.O. Post

Appointment of David L. Turner, P.Eng., 36, of Toronto, as Secretary-Treasurer of the 18,000-member Association of Professional Engineers of Ontario, has been announced by T. M. Medland, executive director.

Mr. Turner brings to his new position five years of A.E.P.O. committee work, having been associated with the company groups committee and the engineering technicians program. He served on the latter's certification board since its inception by the association three years ago.

HOW DID YOUR SUPERSTITION START?

Do you avoid making decisions on Friday the 13th, or knock on wood to ward off bad luck, or change course when a black cat crosses your path?

If you do, you have lots of company. Practically everyone has a pet superstition—and most of them are centuries-old.

Both the day, Friday, and the number, 13, for example, have been associated with bad luck throughout recorded history. Legend has it that Eve tempted Adam on Friday, and from the Middle Ages have come numerous tales of misfortune visited on those who sat 13 at a table.

Carrying a rabbit's foot for good luck—because the rabbit is so prolific—is another old superstition. It originated in the days when families were largely self-sufficient, and the more children, the better the living a family could wrest from the soil.

If you carry an acorn for good luck, you're putting yourself under the protection of Thor, god of lightning and thunder. Ages ago, the oak was supposed to be his tree.

A four-leaf clover was once considered lucky because it was so rare. Today anyone can buy seed and grow his own.

Our forefathers believed that a wish could be held secure in the

spot where the two straight lines of a cross intersected. From this has come our habit of keeping our fingers crossed to make a wish come true.

Long ago people thought evil spirits clustered around the left side of a person's body, and that they could be blinded by a pinch of salt thrown over the left shoulder.

It's bad luck to kill a frog—because people once believed frogs contained the souls of dead children.

There's an old superstition that if a girl is kissed seven times under the mistletoe in one day she will soon marry. This, of course, is just common sense.

The belief that breaking a mirror brings seven years' bad luck began when mirrors were luxury items. People felt that if they smashed a mirror they were also smashing themselves and their good fortune. Why seven years' bad luck? Simply because our forebears believed that life progressed in seven-year cycles.

Are you superstitious about walking under a ladder? Well, the ladder is supposed to be associated with the old symbol of life, the Sacred Triangle. Walking under a ladder supposedly breaks the triangle.

Do you believe a canary brings happiness to a house? This idea

started because canaries generally are faithful to their mates.

Many people who live near the sea believe it's bad luck if a seagull alights on the house. There's a practical reason behind the belief—seagulls often come ashore when a rough storm is brewing at sea.

All through history the dove has been considered a bird of peace. Actually, male doves are scrappy fighters, particularly during the mating season. This legend probably dates from the Deluge, when the dove returned to Noah's Ark carrying an olive banch.

Are you one who believes it's good luck to have a cricket in the house? The creature's cheerful chirp is responsible for the superstition. But you would soon discount the belief if you lived in southern areas where crickets have voracious appetites for clothes.

Did you ever wish on a load of hay? This old custom originated because a good crop of hay usually meant a good harvest of other crops.

Like knocking on wood, the custom of throwing coins into the sea, or into a fountain, dates back to early mythology. People sought favors from gods of the water by offering them coins. ■





THESE LADIES seemed a little apprehensive initially, but after sampling Chef Bill Robinson's french fried corn on the cob, the trio (left to right): Mrs. Patricia Swift, Mrs. Steele Basil, Mrs. Marg. Willforth acknowledged their fears were groundless.

ADMIRING deep-frying equipment in Toronto Hydro's commercial cooking showroom were (left to right): Toronto Hydro Chairman Bert Merson, Fran Deck, a Toronto restaurateur, Miss Irene Taplin and Toronto's Vice-Chairman John McMechan.



A LITTLE CORN - ON THE COB

FRENCH-fried corn on the cob?

Yessir, that's what we said. And dished up with deep-fried banana pie and deep-fried egg salad sandwiches, yet.

Try that daring first bite and you'll find they're all mighty tasty. In fact, they passed the acid test recently when 150 or more critical restaurant and hotel people polished them off at a fish-and-what-have-you fry in Toronto.

The idea was to promote more deep-fat frying and give restaurateurs pointers on frying procedures, but the demonstration also showed off the fast recovery and other advantages of electric frying equipment.

Toronto Hydro, busily promoting the use of electric commercial cooking appliances to stimulate electrical consumption, particularly off-peak load, under the capable supervision of George Exley, commercial cooking specialist, and his assistant, Ed. Howell, of the Toronto system's Consumer Service Division) donated office space for the demonstration.

Proctor and Gamble Co. of Canada sponsored the show for members of the Canadian Restaurant Association.

Later the audience inspected Toronto Hydro's comprehensive display of all types of commercial cooking equipment — when they could tear themselves away from deep-fried Philadelphia cream cheese and olive sandwiches.

Honest . . . they're good.

FOTO-NEWS



A SAFETY RECORD - of more than one million man-hours without a disabling accident has brought a National Safety Council award to Ontario Hydro's Eastern Region, with headquarters in Ottawa. Examining the Award of Merit are (from left): A. W. Manby, general manager; O. S. Luney, retiring manager, Eastern Region; Hydro Chairman James S. Duncan, and G. R. Shannon, Eastern Region safety officer. The award is the first of its kind won by Ontario Hydro and one of two presented in Canada for 1958.



NOTABLE EVENT - A party of visiting Russian engineers went back to the Soviet recently with notes on the Commission's technical operations and achievements neatly recorded in Ontario Hydro notebooks by Hydro pencils. At a Toronto luncheon tendered in their honor, Dr. Otto Holden, Hydro's chief engineer (centre foreground) presented the useful mementoes to the visitors. On the left are: A. A. Mironov, Russian interpreter; S. N. Kurnakov, who represented a Russian plant which manufactures electric generators; Hydro's General Manager, A. W. Manby, and P. S. Chernyshev, chief engineer, Leningrad Metal Works (turbines). On the

right: A. Y. Kuznetsov, chief engineer of the Stalingrad hydro-electric project and head of the group; J. K. Suchanov, a consulting engineer, and Y. I. Kuznetsov, a hydro-electric engineer with the Ministry of Power. Partially hidden behind Dr. Holden is Nikita Smirnov, Operations Division, who assisted in guiding members of the party as they inspected the St. Lawrence Power Project; the Richard L. Hearn thermal-electric plant in Toronto; the Commission's hydraulic models at the A. W. Manby Service Centre; the Sir Adam Beck-Niagara Generating Stations No. 1 and No. 2, as well as hydro-electric plants on the Ottawa and Madawaska rivers.



PLANTPOWER SEMINAR - A study group of the Canadian Electrical Manufacturers' Association has initiated a PLANTPOWER survey designed to provide a streamlined means of measuring a plant's electrical system and its capacity to meet swelling industrial power requirements.

The system was explained in a recent Toronto seminar attended by representatives of Ontario Hydro, municipal utilities, superintendents, consultants, contractors, manufacturers, editors, inspectors and other groups. By fall, C.E.M.A. expects the program to be in full swing across the country. In the accompanying photograph, four delegates (left to right): H. J. Douglas, Scarborough Township P.U.C.; R. J. Austin, Bruce Quan and Bill Barreca examine the contents of a novel do-it-yourself kit to be made available by the Electrical Bureau of Canada to utilities or other groups, which sponsor similar seminars.

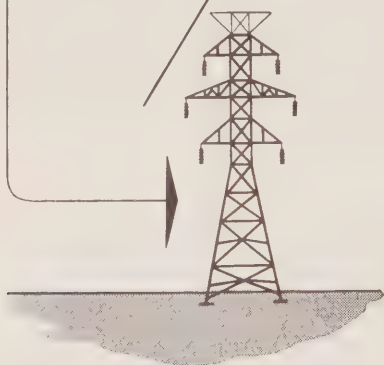


A.M.E.U. HONOR - Two prominent O.M.E.A. representatives, President Bert Merson and Secretary-Treasurer D. P. Cliff, Ontario Hydro commissioner, were on hand to extend congratulations as R. S. Reynolds, Chatham, presented the top honor conferred by the A.M.E.U.—an honorary membership—to J. E. Teckoe, Jr., general manager of Windsor Utilities Commission. Mr. Teckoe, who was president of the A.M.E.U. in 1948, has been an active member since he joined the Niagara Falls Hydro-Electric Commission staff more than 25 years ago. He has been general manager at Windsor since 1955.



FINAL TURBINE - Dwarfed by the blades of the 16th and final turbine fabricated for Ontario Hydro's Robert H. Saunders-St. Lawrence Generating Station at the Scarborough Township plant of English Electric Canada, officials of Ontario Hydro and the company took part in a ceremony to officially mark completion of the huge 180-ton unit. Left to right are: Dr. Otto Holden, Hydro's chief engineer; J. G. Warnock, manager of the company's Hydraulic Department; Hydro's First Vice-Chairman, W. Ross Strike, and Humphrey B. Style, company president. The final generating unit at Hydro's St. Lawrence plant is scheduled for operation in November this year.

ALONG HYDRO LINES



Eastern A.M.E.U. Names McNeely

G. C. McNeely, manager of Smith Falls Hydro-Electric Commission, was elected President of A.M.E.U. Eastern Region at its annual meeting recently.

Other officers are: J. K. Fee, Kingston, vice-president; J. H. Page, Trenton, past president; C. H. Lusk, Belleville, secretary; W. H. Gibbie, Oshawa, treasurer; T. H. Shouldice, Ottawa, rates director; J. M. Campbell, Gananoque, accounting director; J. H. Lyons, Almonte, metering director, and E. L. Burnham, Belleville, and H. W. Little, Brockville, directors.

Sturgeon Falls Plans Substation

Sturgeon Falls is slated for a new Hydro substation costing in the neighborhood of \$30,000.

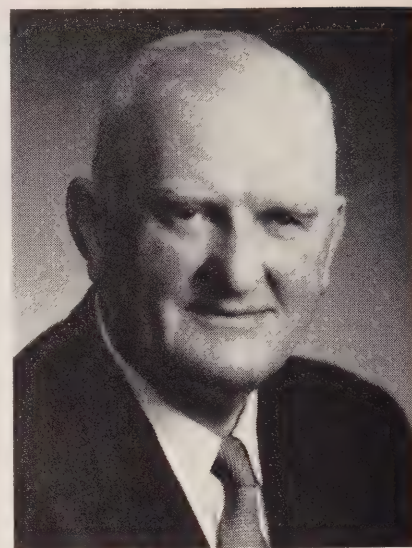
An engineering inspection has revealed that the present substation was 27 per cent overloaded during the past winter. The new substation will provide the town with an adequate power supply for its present and future needs.

W. L. FRASER TO DIRECT ST. LAWRENCE POWER PROJECT

WILLIAM L. Fraser has been appointed Ontario Hydro's Director of the St. Lawrence Power Project. Formerly Assistant Director, he succeeds Gordon Mitchell, who is undertaking other important responsibilities in connection with the power project at the Commission's Head Office in Toronto.

Born in Thorburn, Nova Scotia, Mr. Fraser obtained a B.A. degree from Dalhousie University in 1915 and a B.Sc. degree from McGill University in 1917. He served as a lieutenant in the Canadian Engineers during the First World War.

Prior to joining Ontario Hydro in 1947, Mr. Fraser was engaged in responsible engineering work with private companies as well as provincial and federal government departments. Since he became associated with the Commission, he has been Project Manager at the Chenux development on the Ottawa River, Project Manager at Sir Adam Beck-Niagara Generating Station



W. L. FRASER

No. 2, and Assistant Director of the St. Lawrence Power Project since May, 1957.

He is a member of the Association of Professional Engineers of Ontario and the Engineering Institute of Canada.

GEORGE KEWIN

Associated with Ontario Hydro in several major capacities for 40 years, George E. Kewin, 69, died at his Toronto home recently. Educated at Upper Canada College, he graduated from the



G. E. KEWIN

University of Toronto's School of Practical Science in 1914. He joined the Commission's staff in 1916 and subsequently was identified with several important electrical engineering projects including the design of the 230-kv portion of the Toronto-Leaside Transformer Station, the first of that voltage level designed and built by the Commis-

sion. In 1939 he became System Planning Engineer and in 1948 was named head of the Electrical Engineering Department. For three years prior to his actual retirement in 1956 he served as a consulting engineer. He is survived by his wife, two daughters and one son.

Stouffville P.U.C. Plans New Headquarters

An architect is being engaged to design a new office building and storage warehouse for Stouffville P.U.C.

At a special meeting, the commission decided the new building should have a basement for extra storage and enough office space for future accommodation. It is expected the building will be heated with electricity. The estimated cost is \$25,000.

Two Utilities Set Lower Hydro Rates

New schedules of resale rates have been announced for Nipigon and Blenheim Hydro customers.

Nipigon Hydro Commission has been authorized to make Hydro rate reductions as high as 20 per cent for residential and commercial customers and substantial cuts for power customers, as well as introducing an attractive water heater rate. The reduced schedule applies to all power supplied after April 1 this year.

Alex Bowman, Blenheim P.U.C. chairman, said that the basic difference in the change of rates there will apply to residential customers using more than 250 kilowatt-hours per month due to the introduction of a new and cheaper third rate.

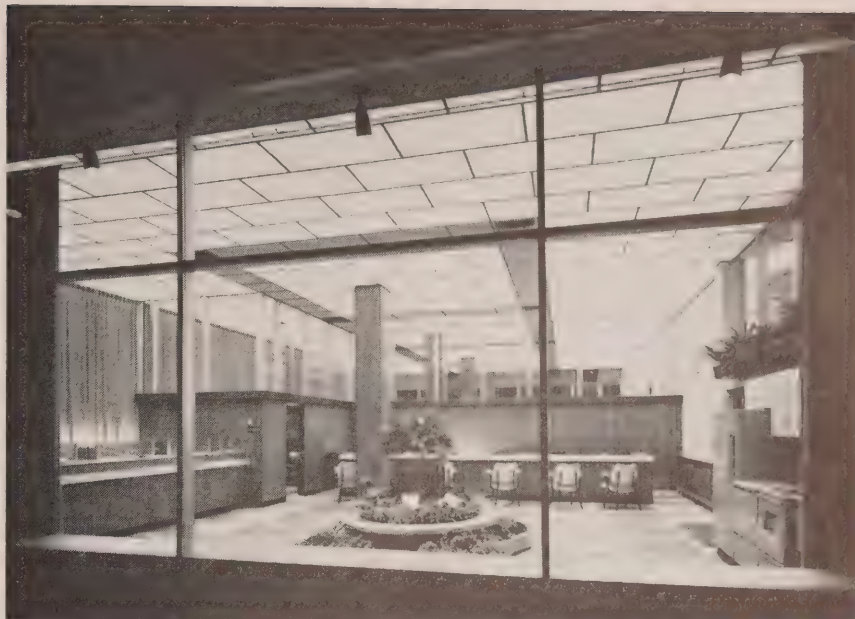
Utilities Step Up Water Heater Programs

Another Ontario utility entered the electric water heater field recently while another made extensive changes in its flat rate heater program.

Leamington P.U.C., approved stocking two sizes of heaters, 40-gallon and 50-gallon types, and will set up service facilities for the units. The utility will supply the 230-volt cable wiring for installations without charge. Free service will be given heater units and thermostats during normal working hours, but a \$3.00 service charge will be levied on after-hour calls.

Lindsay Hydro Commission has announced it will discontinue the \$12.50 installation charge for flat rate water heaters. In addition, the Commission will grant an allowance of \$50 to any new home builder who installs a 100-ampere, 230-volt service and associated electrical installations to the minimum standards required by the Electric Service League of Ontario and a flat rate water heater.

Clinton P.U.C. has started construction of a new office building and garage.



RECEPTION AREA of the new London P.U.C. business office.

NEW OFFICE FOR LONDON

"THE first major face-lifting in 40 years," stated V. A. McKillop, general manager of London P.U.C., in commenting on the new reception area and office facilities recently inaugurated by the London utility.

Designed to provide the maximum in convenience for customers, the attractive office, complete with new billing machines, now occupies the ground floor of the utility building.

Large modern show windows, tasteful decoration, and a colorful floral display greet the customer, who can now settle accounts, discuss service problems, obtain information, or register for service in comfortable and convenient sur-

roundings. The walls, finished in matched French mahogany, are complemented by a full luminous ceiling, employing fluorescent fixtures and honeycomb plastic louvres to provide adequate general lighting.

The reception area includes a model kitchen, complete with large and small appliances, lending a pleasant contrast to the business-like surroundings.

Mr. McKillop indicated that public reaction has been favorable, and he is confident that the new facilities will promote greater efficiency in utility employees' dealings with customers and in handling a greater work load in the future. *by R. J. Smart.*

Dunnville Prepares Unified Services Map

A scale map showing all town services, both underground and overhead, is a current project of interest to Dunnville citizens.

John Dawson, Dunnville P.U.C. manager, who is active in the pro-

ject, recently stated that the map, on a scale of 40 feet to the inch, will indicate the position of all Hydro and telephone lines, sewers, waterworks and gas mains. The map will be particularly useful in opening new streets and in locating underground services in winter.

Administrators Honor

O. S. Luney

The Ottawa group of the Institute of Public Administration of Canada honored O. S. Luney, retiring manager of Hydro's Eastern Region, at its annual meeting recently. Mr. Luney was a member of the institute executive for many years. At the same meeting, P. L. F. Riches, personnel officer, Eastern Region, was elected a director.

Paisley Plans

Face-Lift

Extensive alterations scheduled for Paisley town hall will be the first major change in the structure since it was officially opened in 1877. When construction is completed, it will house both municipal and Paisley Hydro offices.



HON. R. W. MACAULAY

Hon. R. W. Macaulay Becomes Minister of Energy

Hydro's Second Vice-Chairman, Hon. Robert W. Macaulay, M.L.A., was sworn in recently as the first Minister of Energy in the history of Ontario or Canada.

Mr. Macaulay, formerly minister without portfolio, is the second youngest cabinet minister in Ontario history. He will retain his association with Hydro in addition to his new ministerial duties.

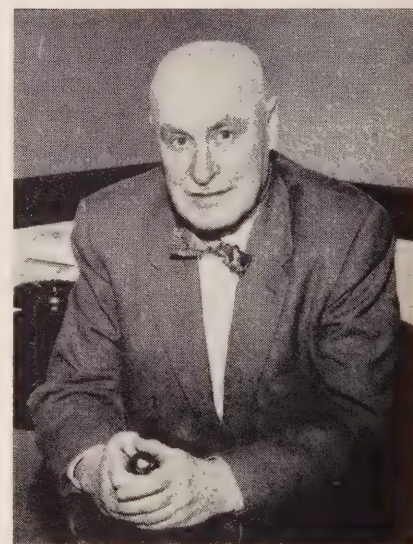


H. R. GRAFF

H. R. Graff Named To Niagara Post

An appointment of particular interest to municipal and Ontario Hydro representatives in the Niagara Region has been announced. Succeeding Daniel T. Flannery, a veteran of more than 40 years' Hydro service who retired on May 31, Howard R. Graff has been named as the region's Consumer Service Engineer. A graduate in electrical engineering of the University of Toronto, Mr. Graff joined the Hydro staff in 1931. During the ensuing decade, he held various positions in Toronto, Burlington and Hamilton. From 1941 to 1945 he served as Superintendent of Hydro's rural offices at Mitchell and Woodbridge. Subsequently he was named senior municipal engineer at Head Office and later consumer service superintendent in the

Northeastern Region. In 1948 he transferred to the Frequency Standardization Division where he gained valuable experience before returning to the Consumer Service Division. His predecessor, Mr. Flannery was born at North Bay and graduated from the University of Toronto in 1915. After holding positions with private firms, he joined the Ontario Hydro staff in 1918. As a member of the Municipal Department, he was concerned, principally, with Hydro operations in the Georgian Bay and Northern Ontario areas. When the Commission acquired the properties of the Northern Ontario Power Company in 1944, he devoted his entire attention to the Thunder Bay System and the Northern Ontario Properties until 1947 when he was appointed to the Niagara Region post.



D. T. FLANNERY

Former Ottawa Commissioner Passes

Former Ottawa Hydro Commissioner, Edward A. Band, 73, died recently in hospital after a long illness. The deceased was a former alderman and President of the Central Canada Exhibition Association. Before his retirement he was President of Band and Cole Ltd., plumbing and heating firm.

New Building For Wingham Area

A new office and service building is being built to serve Ontario Hydro's Wingham area customers.

Constructed of cement blocks and brick, and measuring 100 x 60 feet, the structure will combine an area office, a material and tool store room, as well as a large parking area.



D. A. RAMSAY

D. A. Ramsay Appointed Consumer Service Engineer

R. M. Laurie, manager of Ontario Hydro's Western Region, has announced the appointment of Donald A. Ramsay as Consumer Service Engineer in the Western Region.

Mr. Ramsay, who graduated from Queen's University with a B.Sc. degree, joined Hydro in May, 1946, as a junior engineer-in-training with the Commission's Municipal Department. He later became Consumer Service Superintendent in the Western Region and then Manager of the Windsor Area. For the past 14 months he has been Consumer Service Superintendent in the Toronto Region. Married, Mr. Ramsay is the father of three boys.

Ontario Cities Augment Capacity

Construction has started on North Bay's fifth substation. Work is scheduled to begin shortly on two additional bungalow-type stations at Sarnia, bringing that city's total to nine.

Several new distribution lines will be constructed by North Bay Hydro in connection with the new substation, scheduled for completion this year.

A. M. PEDERSEN APPOINTED EASTERN REGIONAL MANAGER

APPPOINTMENT of Axel M. Pedersen, a veteran of 30 years' Hydro experience, as Manager of the Commission's Eastern Region with offices in Ottawa has been announced.

He succeeds O. S. Luney, who retired on May 31 this year.

Born in Denmark, Mr. Pedersen completed three years in engineering at the University of Copenhagen before he came to Canada and graduated from Queen's University, Kingston, with the degree of B.Sc. in electrical engineering.

He joined Hydro in 1929, became Electrical Maintenance Superintendent of the Niagara District, and in 1948 was appointed Eastern Region Operations Engineer.

Hydro's Eastern Region, comprising 11,000 square miles west of the Quebec border and bounded partially by the Ottawa and St. Lawrence rivers, includes 41 municipal electrical utilities and 11 rural operating areas.



A. M. PEDERSEN

Mr. Pedersen is Past Chairman of the American Institute of Electrical Engineers, Ottawa section, and a member of the Ottawa Kiwanis Club, Ottawa Electric Club and Association of Professional Engineers of Ontario.

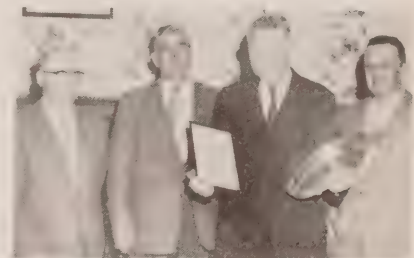
RETIRING COMMISSIONER FETED

DR. R. A. PATTERSON's 35 years' service to his community were recognized by Kemptville recently.

Members of Kemptville Hydro-Electric Commission, as well as former commissioners, other civic associates, and representatives of Ontario Hydro attended a testimonial dinner in Dr. Patterson's honor.

In his review of the retiring commissioner's career, Reeve J. R. Patterson said that Dr. Patterson first entered public life as a member of the council in 1923. He served until 1926 and returned to municipal office from 1929 to 1931 as Reeve of Kemptville. He was Warden of the United Counties of Leeds and Grenville in the latter year.

Elected commissioner in 1928, Dr.



Patterson became chairman of the commission in 1929 and retained that post until his retirement.

The retiring utility commissioner is shown in the accompanying photograph holding an engraved silver tray and scroll with members of the 1959 Kemptville Commission (left to right): R. A. Henderson, chairman; Reeve Patterson and Dr. L. G. Coleman.

Fifth Unit At Abitibi

As part of its multi-million dollar expansion program in the North-eastern Division, Ontario Hydro brought a new fifth unit into operation at its Abitibi Canyon Generating Station recently.

Rated at 45,000 kilowatts, the unit replaces one removed to the DeCew Falls G.S. during the war-time emergency. The replacement represents the first stage of a hydro development program in the area. Over the next ten years it is planned to develop economic hydraulic



sites north of Cochrane, which may ultimately total 1,000,000 kilowatts.

First of the new projects, Otter Rapids, situated some 23 miles north of the Abitibi plant is now under construction and is expected to be in service in 1961. This plant is expected to develop a total of 131,000 kilowatts.

Power Comes To Caramat

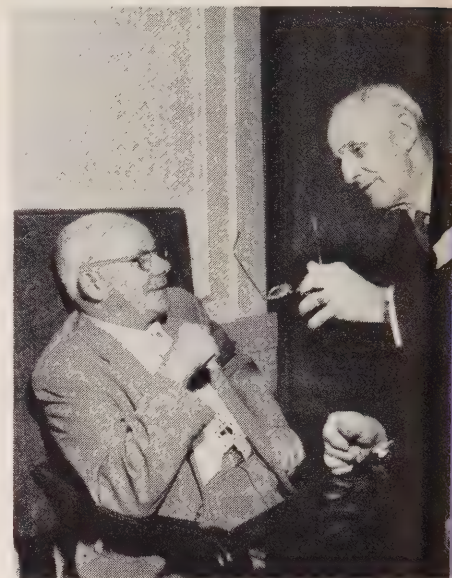
Caramat, 40 miles southeast of Geraldton, Ont., recently received Hydro service for the first time. The townsite on the Longlac-Hornepayne branch of the main C.N.R. line is headquarters for the woodlands division of the Marathon Paper Company in this area. Some 90 customers already have signed up for Hydro service, which has replaced diesel generated power.

TORONTO STAFF CELEBRATES

THE fact that no new members joined the ranks of the Toronto Hydro Quarter-Century Club this year did not mar the enjoyment of the 415 utility veterans who gathered for the 1959 banquet.

They smilingly recalled that 25 years ago Toronto Hydro was not taking on new staff because of depression conditions.

Supplementing the lack of new 25-year staffers, however, members applauded as Chairman Bert Merson and Vice-Chairman John McMechan presented 40-year pins to 15 employees of the large municipal utility. The photograph below, which shows (seated left to right): W. A. Cosburn, Albert Farns, Thomas McKenzie, John J. Fortune, Thomas Corner, John Berry, Harvey M. Longstreet, (standing) Frank King and Sydney King, is indicative of the jovial mood that prevailed. In the smaller photograph, William



H. Priddle, a retired employee emphasizes a point (with the aid of his spectacles) to Charles Snack.



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(Sample advertisement—mats available to the associated municipal utilities
for use in local "Live Better Electrically" campaigns.)





SCIENCE AND MEDICINE DIVISION



ONTARIO HYDRO NEWS JULY-AUGUST 1959





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HYDRO NEWS

END OF A CYCLE

ON July 9 this year, Ontario Hydro wrote finis to one of the most interesting and remarkable chapters in its five decades of history.

This issue records the successful completion of the Commission's frequency standardization program—five years and three months ahead of schedule. The elimination of Ontario's 25-cycle "island" is regarded as one of the world's largest engineering projects.

While the reasons for the 25-cycle frequency in Ontario have been explained on numerous occasions, it is well to remember that Ontario Hydro "inherited" this frequency when it signed the first contract for power with the Ontario Power Company at Niagara Falls, Ont., in 1907. At that time, the Niagara district was the major source of hydro-electric power and 25 cycles was the established frequency of the plants operating there. And so that first contract created the nucleus of what was to become the Niagara Division of Hydro's Southern Ontario System embracing 17 major Ontario cities and a large number of progressive towns and thriving rural communities.

In 1949, after assiduous engineering studies, the Commission began the momentous task of standardizing 7,014,402 pieces of frequency-sensitive electrical equipment for 1,026,791 customers in this richly-endowed and highly-developed zone, as well as a section of north-eastern Ontario. The jobs ranged from a transformer 520 feet above the Detroit River atop the international Ambassador Bridge at Windsor to a pump motor 80 feet down in a farmer's well. Large newspaper plants were converted without missing a deadline. Special arrangements were made for radio stations, water

pumping installations and transportation utilities without disrupting normal services.

While the frequency changeover project has been moving forward, Ontario's economy and standard of living have been undergoing a very gratifying and almost incredible process of improvement. During this period, the number of frequency sensitive appliances increased from an average of 2.7 per domestic customer to almost six—reaching a grand total of more than five million.

The elimination of flickering 25-cycle lights, as well as the erstwhile inconvenience and expense inherent in moving between Ontario's 25-cycle and 60-cycle areas are among the obvious benefits. But they are overshadowed by the fact that customers will pay less for 60-cycle appliances while Ontario Hydro and the associated municipal utilities will realize important savings in the production and distribution of electricity. These factors will have a long-term effect in keeping Ontario's electrical rates among the lowest in the world.

The disappearance of the lower frequency permits operation of this section of the Commission's system in parallel with the remainder of the Southern Ontario System, as well as with systems in neighboring provinces and adjacent areas in the United States. This fact is of paramount importance in the light of the continuing development of an integrated electrical grid throughout North America.

It is significant, we think, that the project should have reached completion at the beginning of a new era as Ontario moves confidently forward in the vanguard of the nuclear power age. ■

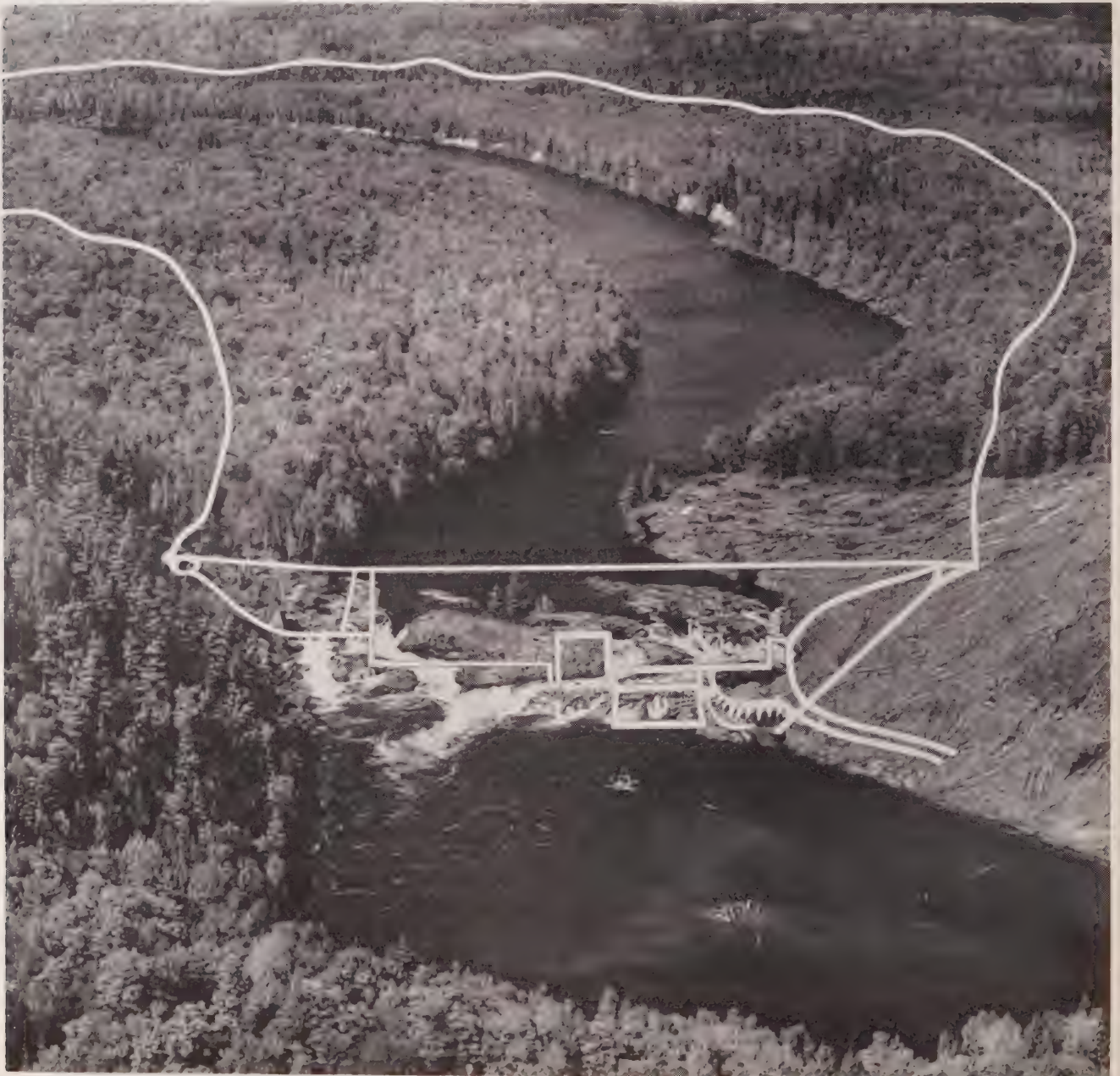
COVER PHOTOGRAPHS

During her visit to the St. Lawrence Power Project on June 27 this year (see page 17), Her Majesty, Queen Elizabeth II, and U.S. Vice-president Richard M. Nixon were invited by Ontario Hydro Chairman James S. Duncan to sign a special

guest book at the Robert H. Saunders-St. Lawrence Generating Station. The inscription on the International Friendship monument on the downstream deck of the powerhouses, which was unveiled by Queen Elizabeth, is depicted on the back cover.

Faced with a shrinking reserve of hydraulic sites, Ontario Hydro turns to thermal and nuclear power

SUPERIMPOSED white lines indicate approximate position of Ontario Hydro's new Red Rock Falls plant and the level of the water when the Mississagi River station is completed. The 38,000 - kilowatt, two-unit development is scheduled for initial operation late in 1960.





CANADA'S first nuclear-electric station, known as NPD (Nuclear Power Demonstration), under construction near Ontario Hydro's Des Joachim's Generating Station at Rolphon on the Ottawa River. The photo shows part of the shielding for the ends of the horizontal reactor tank which will contain the uranium fuel rods for the plant.

BY DON WRIGHT

CHANGING PATTERN

ONTARIO Hydro is advancing rapidly into a new age and new methods of power generation.

With the completion of the St. Lawrence Power Project late in 1959, the last remaining hydro-electric site of large capacity in Ontario will have been developed. Ontario Hydro must then turn more and more to thermal-electric generation to meet the expanding power requirements of the province.

While there still remains some 1.8 million kilowatts of hydraulic capacity estimated to be capable of economic development, this would not suffice for more than five years, even if it were possible to develop all this potential before any thermal projects were undertaken.

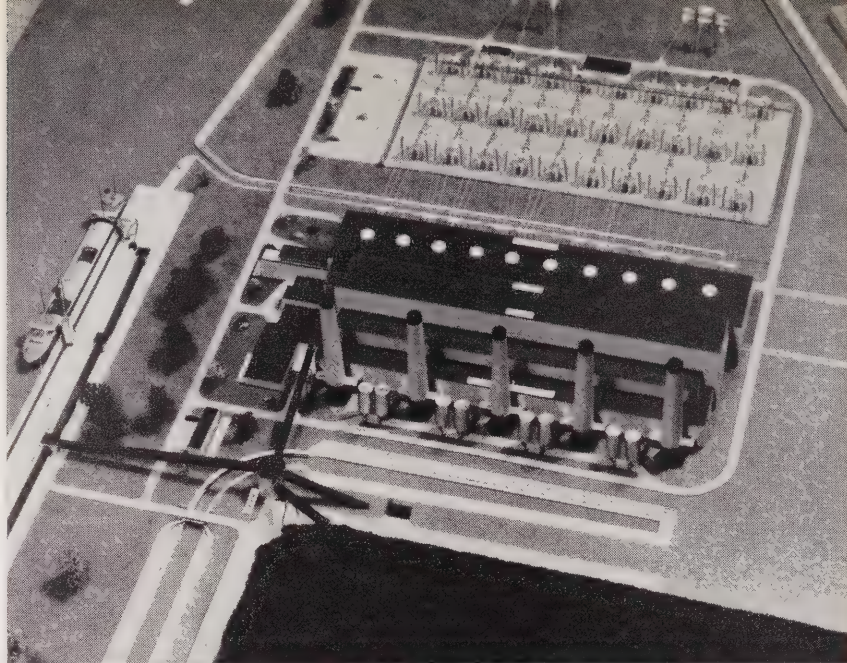
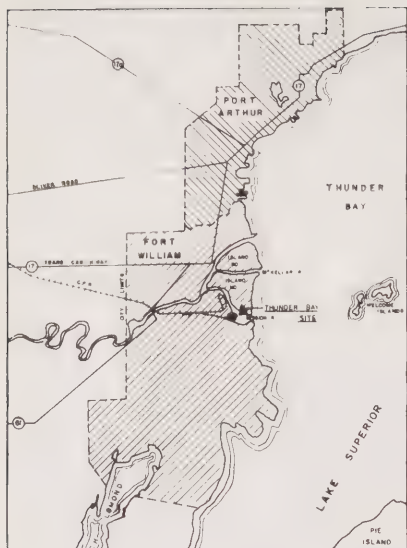
In addition, these undeveloped sites are relatively small, and they are located, for the most part, in the more northerly sections of the province, while the greatest load increase is largely concentrated in Southern Ontario. An experimental line to be used in a two-year study of extra-high-voltage transmission may, however, have an important bearing on the economic development of these sites, and on the ultimate distribution of their power.

Closely allied with this experiment is Ontario Hydro's tentative plan for the development, within the next 10 to 12 years, of eight sites in north-eastern Ontario with a combined potential capacity of approximately one million kilowatts. These are at Otter Rapids, Coral Rapids and Nine-Mile Rapids on the Abitibi

River; Upper Long Rapids, Lower Long Rapids and Little Long Rapids on the Mattagami River, and Long Rapids and Thunder House Falls on the Missinaibi River. Work has already commenced at Otter Rapids.

In order to incorporate this power into the system economically, the Commission anticipates that its EHV experiments will provide the engineering design necessary to construct two extra-high-voltage transmission lines from the James Bay watershed to Sudbury, with an intermediate switching station at Timmins. It is expected that the new system will operate at either 380,000 or 460,000 volts depending on the results of the experiments. The maximum transmission voltage

(Continued on page 4)



ARCHITECT'S MODEL of the new thermal-electric Thunder Bay Generating Station, now under construction at Fort William. Location of the new plant is indicated on the accompanying map.

now used by Ontario Hydro is 230,000 volts.

The Commission intends to co-ordinate the development of its northern hydraulic sites with the construction of conventional thermal-electric facilities.

Offered Economies

The transition from hydraulic to thermal generation may be said to have commenced with the construction of steam plants at Windsor and Toronto in 1949. These stations were designed to back up generation from hydro-electric plants being built on rivers with widely-fluctuating flows, and to provide additional security in areas entirely dependent on long transmission lines. At the same time, these thermal-electric plants offered important operating economies at times of peak load. The Richard L. Hearn Generating Station at Toronto is presently being expanded from 400,000 kw. to 1,200,000 kw. to increase the proportion of dependable high load factor power in the system.

To meet the demand for power and to provide adequate reserves, it is estimated that Ontario Hydro may require generating resources in

the neighborhood of 22 million kilowatts by 1980. Of this, more than eight million kilowatts are expected to be produced by conventional thermal-electric methods.

The Commission intends to build two coal-fired plants in the Toronto-Hamilton area, which will be among the largest in the world. While the growth of power requirements in the area will determine the timing of these two developments, the first, the Lakeview Generating Station, west of Toronto, is being designed for a capacity of 1.8 million kw.

This first 300,000-kilowatt unit is scheduled for operation by 1961, with one additional unit of similar capacity scheduled for service in each of the three succeeding years. Details of the second plant have not been completed, but it will likely be of comparable size. A third new thermal-electric station has been authorized at Fort William, and is scheduled for service in 1961. Known as the Thunder Bay Generating Station, it will have an initial capacity of 100,000 kilowatts, with provision for enlargement to one million kilowatts as required.

Meanwhile, the Commission has

been investigating additional sites in Southern Ontario, as part of a long-term plan for the acquisition of suitable property for future expansion. Earlier this year, approval was given for the purchase of two adjacent parcels of land between Toronto and Whitby on Lake Ontario. While it is not anticipated that further conventional thermal-electric stations will be required in this part of the province within a decade, it is essential that suitable land, with access to water, be acquired while it is available. In the selection of sites, an adequate water supply is a primary consideration whether the plant utilizes coal or nuclear fuel.

Adjacent to Industry

The Southern Ontario stations will be built on sites adjacent to the heaviest industrial concentration in the province. Situated between the great hydraulic developments on the Niagara River and those to the east on the St. Lawrence and Ottawa Rivers, they will also provide added security against transmission line failure. They will operate chiefly as peak load plants initially, and in spite of their size the units will

be able to pick up loads very quickly. Since the stations will operate at a comparatively low load factor initially, provision will be made for operating some of the generators as synchronous condensers.

Long Dock

The Lakeview station will occupy a site approximately 128 acres in extent at the west end of the former Long Branch Rifle Range. Docking facilities will be sufficient to permit two large coal carriers, up to 750 feet in length and with a maximum draft of 27 feet, to discharge coal simultaneously. Because of shale ledges extending into the lake at this point, it will be necessary to construct a dock more than half a mile in length. Extensive and recurrent dredging would be the more costly alternative. The area set aside for coal storage will ultimately permit as much as 2,500,000 tons to be stockpiled.

Upon completion, the Lakeview plant will have an annual coal consumption of about two million tons at the anticipated load factor. Circulating water requirements will be on the order of 1,200,000 gallons a minute at maximum capacity. Although not on a continuous basis, this is a much greater rate of use than the total consumption of all Metropolitan Toronto. This water will be purified and returned to Lake Ontario.

Each of the plant's stacks will rise to a height of approximately 490 feet, and particular attention is being paid to the design of these stacks to ensure maximum dispersion of stack emission. The Commission is working continuously to attain complete freedom from air pollution in connection with the operation of its coal burning stations.

Work is well under way at the site of the Thunder Bay Generating Station at the Lakehead. This 118-acre site is on an island formed by the branches of the Kaministiquia River where they enter Lake Superior within the city limits of Fort William.

All major components for the first unit, including the 100,000-kilowatt turbine generator and the 850,000-lb/hr steam generators, have been ordered. While it is anticipated that the second unit will have a similar capacity, the size of future installations has not been finalized. Site preparation and pile driving associated with the construction of a 700 foot-long dock were completed late last year.

Nuclear Development

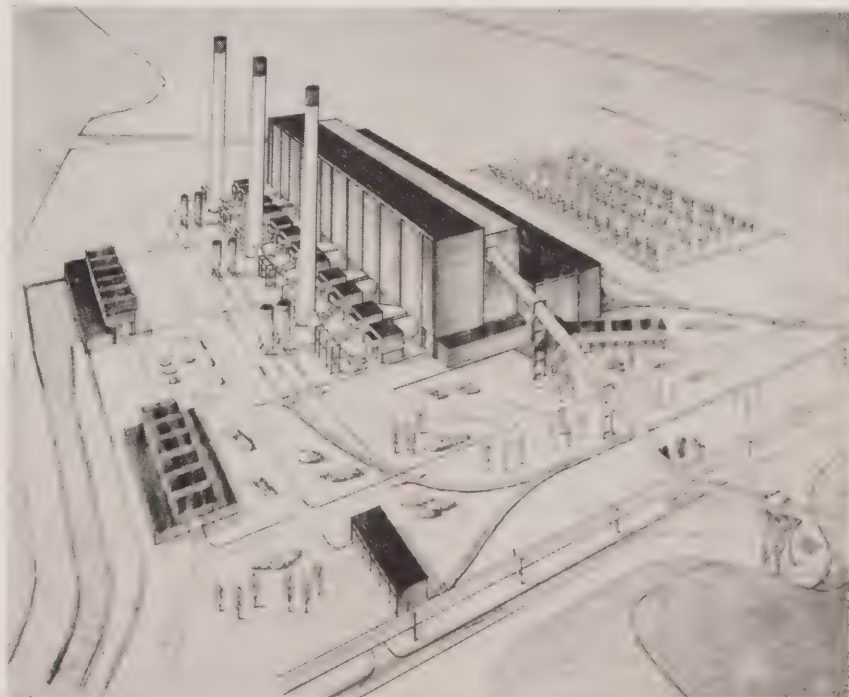
While conventional thermal-electric generation will dominate the Commission's expansion during the next decade, Ontario Hydro is also actively engaged in a nuclear-electric development program. Already participating in the design and construction of the 20,000-kilowatt NPD plant near Chalk River, Hydro has decided to extend its activities by sharing in the design and development phase of a full-scale nuclear plant.

AN ARTIST'S CONCEPTION of the completed Lakeview Generating Station. As indicated on the map (right), the new plant is being built on Lake Ontario between Toronto and Port Credit. Plans call for an ultimate capacity of 1.8 million kw, making it one of the world's largest thermal-electric plants.

Present plans envisage the first nuclear unit of this uranium-fueled, heavy water moderated and cooled type of plant being in the 200,000-kilowatt range. Based on present knowledge, it would appear possible to bring such a station into operation as part of the Hydro system by 1965 or possibly earlier (see page 7).

Estimates suggest that approximately one third of the Commission's

(Continued on page 34)



TORONTO is seeing its 165-year-old main street in a new light.

Yonge Street is the first thoroughfare in Canada to replace light standards and overhead wires with glareless facade lighting.

The new lamps are attached to building fronts along a two-mile section of the venerable street. They are about 10 times as bright as the old ones, but refractive prismatic lenses illuminate the opposite side of the road with a soft, "stage-light" effect.

Wi' 30 pipers and a', the 48th Highlanders band led an 11-car parade up the street recently to celebrate completion of the College Street to Davenport Road phase of the brightening project.

Crowds swarmed around a Toronto Hydro truck and trailer that hauled away the last wooden pole—labelled "Off To The Woodpile."

President Dr. Peter Heywood of the Yonge-Bloor-Bay Association, which had pressed for facade lighting, pushed a plunger from the back seat of an auto to light up the final 12-block strip.

"This is the most up-to-date street

lighting in the world," he said, "and we could never have had it without the full and enthusiastic backing of the City and Toronto Hydro."

Mayor Nathan Phillips also paid tribute to Toronto Hydro's hard work, and added:

"I hope that now we'll direct our attention to other parts of the city, so that some day all unsightly poles will be eliminated."

Toronto Hydro Chairman Bert Merson told the crowd: "This has cost money and a lot of time, for there were a great many problems to be overcome. We, at Toronto Hydro, are very proud of the part we played."

Nobody is prouder than the Yonge Street merchants who gladly consented to have the new fixtures mounted on their store fronts. Forgotten is the upheaval accompanying construction of Canada's first subway, while the wooden, steel and concrete poles, which supported earlier lighting facilities (in that order) are now just a memory.

The consensus about the new, neat look: a bright idea.

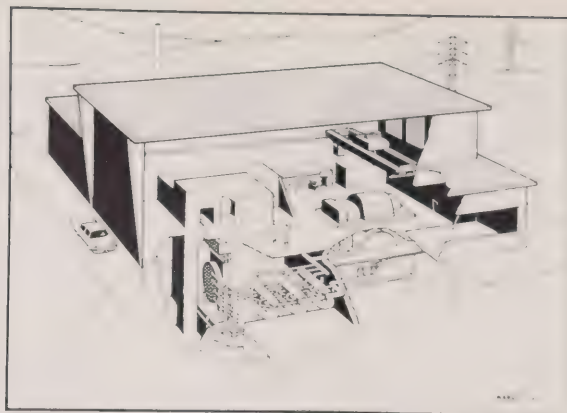
— by J. G. Foster

BRIGHT IDEA

FACES LIT UP and so did a long section of Toronto's Yonge Street as Dr. Peter Heywood, president of the Yonge-Bay-Bloor Association, pressed the switch to inaugurate the new facade lighting. Mayor Nathan Phillips (centre) and Toronto Hydro Chairman Bert Merson were key participants.



NUCLEAR POWER MOVES AHEAD



ARTIST'S conception of the CANDU nuclear-electric station.

ONTARIO HYDRO has termed a recent Ottawa announcement that Atomic Energy of Canada Limited is to begin immediately the final design and construction planning for a large-scale nuclear-electric station as "a major step forward in Canada's nuclear power program."

The plant is estimated to cost about \$60,000,000 exclusive of design and development costs, and could be completed and in operation late in 1964 or early 1965 at a site yet to be determined.

Ontario Hydro announced recently that options have been taken on several properties in an area some 15 miles north of Kincardine on Lake Huron. Foundation conditions and other points determining the suitability of the site will be investigated immediately. While other locations are being considered, several factors make the Kincardine area exceptionally favorable for the establishment of a nuclear-electric station. The final selection of a site will be dependent on approval by the Atomic Energy Control Board.

Known as CANDU (Canadian Deuterium Uranium), the power station will produce 200,000 kw of electricity and will use a natural uranium heavy water system. It will be similar in general principles of operation to the NPD (Nuclear Power Demonstration) plant, which is now under construction near Rolphon, Ont., as a joint project of

A.E.C.L., Ontario Hydro and Canadian General Electric Company Limited. The NPD station will produce 20,000 kw of electricity when it goes into operation in 1961.

Ontario Hydro has been closely associated with AECL on an increasing scale since 1954, when preliminary design of the NPD plant was first undertaken. Last year, a nuclear power plant division of the Crown agency was established in Toronto and the Commission assigned to this group a number of its engineers and certain facilities. Prime responsibility of this division has been to undertake the preliminary design and development work for the CANDU project.

The work of this division, together with results of development work at Chalk River and design work on NPD done by the Canadian General Electric Company in Peterborough, has increased the confidence of the engineers and scientists involved in these programs to the point where they are convinced that a large scale natural uranium heavy water atomic power station offers the best promise to produce economic atomic power in large base load units for a public utility in Canada.

In addition to substantial support in the design of this CANDU station, Ontario Hydro will provide a site, co-operate in its construction and operate it as a unit in its power distribution system. Ontario Hydro

will buy the power produced and will purchase the plant when it has demonstrated that it has suitable characteristics for Hydro's power system.

At a Toronto press conference, Ontario Hydro's First Vice-Chairman, W. Ross Strike, pointed out that the basis on which the plant will be purchased will permit production of power at a cost competitive with that produced by modern coal-fired plants of similar size.

"This fact is of prime importance. Ontario Hydro will be fulfilling its obligation to provide power at the lowest possible cost, and, at the same time, will have contributed to nuclear pioneering work in Canada."

Apart from providing a further market for Ontario uranium, the decision will also decrease the Commission's dependence on fuel brought in from elsewhere.

In some areas of Canada, particularly Southern Ontario, the hydraulic sites remaining to be developed are limited. Thus, there will be an increasing dependence upon coal burning stations. Ontario Hydro has estimated that if nuclear-generated electricity were not available at a competitive cost by 1980, it would have to be importing from the United States 26,500,000 tons of coal annually at a cost of some \$300,000,000.

(Continued on page 35)

CANADA'S CASTLES

by Joan MacLean

CASTLES-in-Spain may be built on dreams, but castles in Canada are constructed on more substantial foundations. And for a nation which has made little use of castles for military defence, Canada has a surprising number of them.

Most famous, perhaps, is Toronto's Casa Loma, Sir Henry Pellatt's idea of a dream home.

When 16-year-old Henry entered his father's Toronto brokerage firm, he had four ambitions: to break the North American one-mile running record; to become a millionaire; to command the Queen's Own Rifles Regiment which he had recently joined as a private, and to build his own castle.

Two years later, in 1875, he won the North American one-mile running championship although he didn't break the record. At 30 he was a millionaire. He was Officer-in-Command of the Queen's Own Rifles Regiment from 1901 to 1921. And in 1913 he moved into his 98-room castle.

Blueprints for the castle were drawn up by E. J. Lennox in 1911 from hundreds of sketches Sir Henry had made on trips to Europe. As a result, although the castle is French baronic in theme, certain towers and wings betray Scottish, English, Italian and Rhenish origins.

The building itself, not counting the furnishings, cost \$3,500,000. It's valued today at \$15,000,000.

Sir Henry combined the usual castle features—towers, dungeons, sliding panels and secret staircases—with the trappings of modern

comfort, represented by 30 bathrooms, 52 telephones, elevators, an immense swimming pool, an indoor rifle range, three bowling alleys and a thermostatically-controlled steam heating plant.

The Great Hall, 80 by 80 feet, has a floor of eight-inch oak planks laid in parquet syle. The floor of the 60 by 70-foot dining room is in herringbone pattern. The 200-foot long main corridor, a copy of Windsor Castle's Peacock Walk, has alternate planks, 2½ inches thick, of Burmese teak and mahogany, held by mahogany pegs and dove-tails and laid over an 18-inch concrete base.

A Canadian theme prevails in the marble-lined observatory. The south wall has a horizontal grain representing the Atlantic Ocean and the north wall a vertical grain representing the Rockies.

Large enough to accommodate 100,000 books, the library boasted the finest indirect lighting system on the North American continent when Casa Loma was built. Sir Henry, incidentally, organized the Toronto Electric Light Company, and was initially responsible for bringing electricity from Niagara Falls to Toronto.

Underground Passage

Connected to the castle by an 800-foot underground passage are the stables and carriage house. Stalls, built of Spanish mahogany with floors herringboned to protect the horses' hooves, are now used to display several antique automobiles.

During World War II, the stables

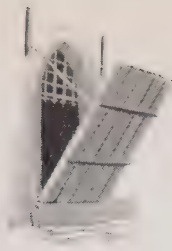
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NOW ALMOST A LEGENDARY FIGURE, Sir Henry Pellatt completed Toronto's 98-room Casa Loma in 1913 and lived there 11 years.

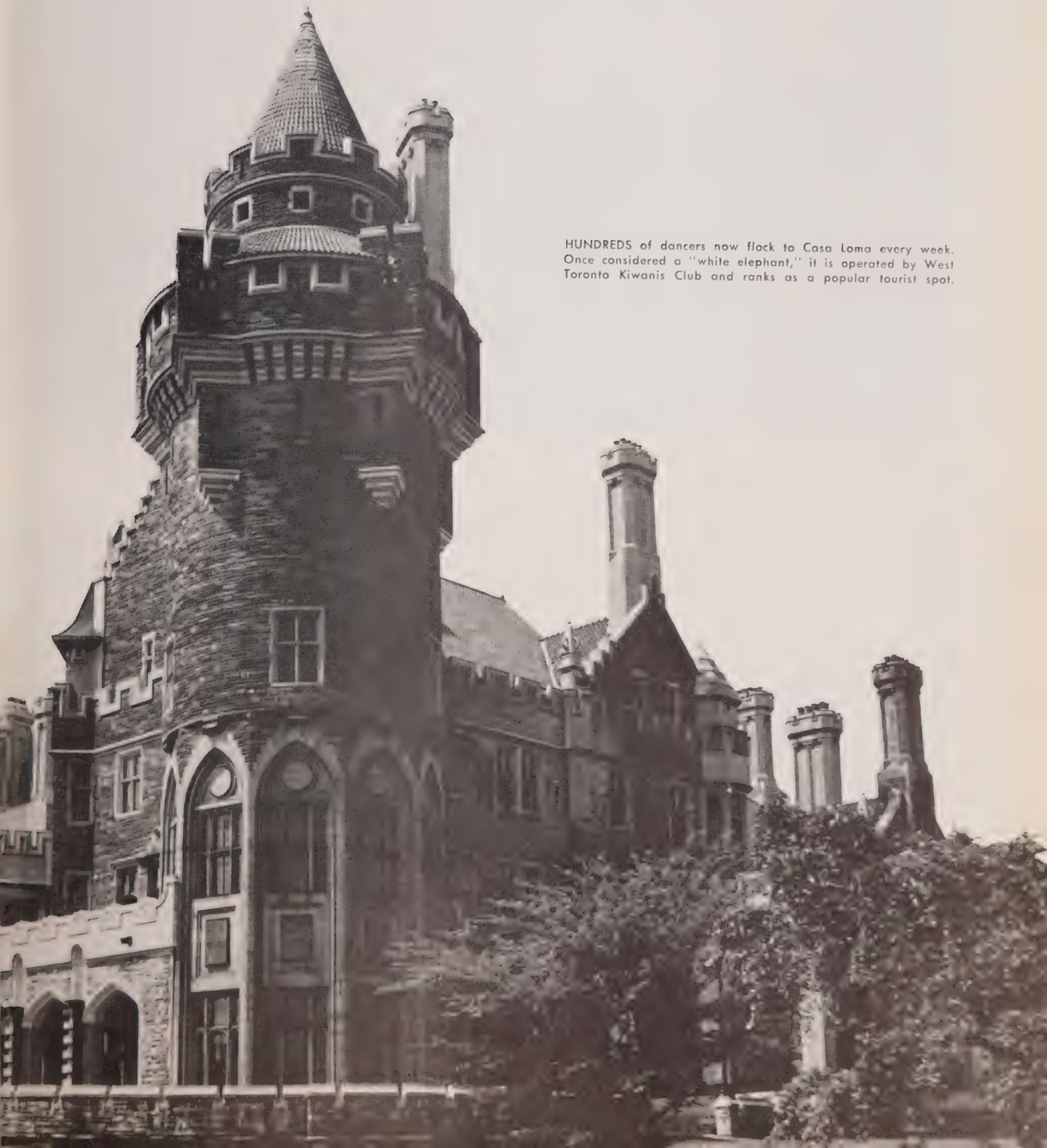


TLES



No ghosts in these ancestral halls - -
they all have a 20th Century function

HUNDREDS of dancers now flock to Casa Loma every week. Once considered a "white elephant," it is operated by West Toronto Kiwanis Club and ranks as a popular tourist spot.

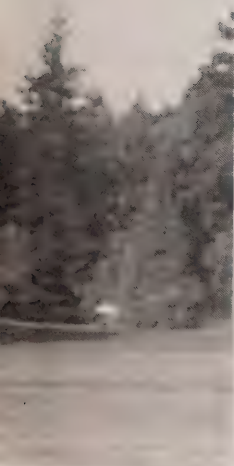


HAMILTON'S DUNDURN CASTLE, BUILT BY SIR ALLAN MacNAB IN 1832, SERVES AS A MUSEUM.



HATLEY PARK NEAR VICTORIA, B.C., HAS BEEN CONVERTED TO A CANADIAN ARMY STAFF OFFICERS' COLLEGE.





and carriage house served as headquarters for assembly of sonic equipment used by ships to detect U-boats. To avoid suspicion, the operation, carried out with the utmost secrecy, involved strict arrival and departure times for workmen, singly or in pairs: some went through the underground passage, others directly into the stables.

Refrigerators, large enough to hold sides of beef or carcasses of venison, and ovens, which could roast an entire ox, provided Sir Henry and Lady Pellatt with the facilities to feed an army — and they frequently did. “Having the regiment up for the weekend” was their idea of entertaining.

In his plans for Casa Loma, Sir Henry made provision for ultimate conversion to a military and historical museum. Accordingly the interior was built of masonry and the main floor of reinforced concrete, covered with teakwood, in order to take the heaviest military equipment. The basement, with 20-foot ceilings, was made large enough to drill a regiment.

Sir Henry’s foresight has helped the castle pay dividends, not as a museum but as one of Toronto’s popular dance-halls and tourist attractions. Instead of echoing to the rumble of military equipment, the beautiful floors resound with the tapping of hundreds of dancing feet.

After the death of Lady Pellatt in 1924, Sir Henry sold the contents, and moved to his country estate near King, Ont. For 12 years, the castle, which proved impractical as a hotel, stood desolate and empty. During this period it was taken over by the City of Toronto.

In 1937 the Kiwanis Club of West Toronto leased Casa Loma by special agreement with the City, and restored it as a tourist attraction. At the end of the first summer, 134,241 tourists and dancers had visited the castle. Today Casa Loma remains high on the list of “things to do in Toronto.”

One Canadian castle which has become a museum is Dundurn

Castle at Hamilton. Sir Allan MacNab, Laird of Dundurn, never visited his ancestral home on Loch Earn in Scotland, but in 1832 he built Dundurn Castle — which means “fort on the water” — on a 21-acre site similar to the original one. Also on the property is Castle Dean, a miniature castle named after the first factor, or supervisor, of Dundurn.

Castle Dean is now a private home, as is another Castle known variously as McLaren Castle, Castle Grange and Bahnagowan, near Belfountain in Peel County. It was renovated in 1957 by James Ross, who lives there with his family. Research seems to indicate that Alexander McLaren built the castle sometime in the 1850s.

“Mackintosh Castle” in Kingston is really just a large house. Donald Mackintosh, of Glasgow, laid its foundations in 1853 and Joseph Doyle completed it four years later.

First Castle

Canada’s first castle, built at Quebec on a precipice overlooking the St. Lawrence River, was the residence of New France’s second governor. All that remains of the original Chateau Frontenac is the Malta Stone, allegedly saved from an early Jesuit priory on Malta. Today, on the same site, is the commercial castle with the same name.

Hatley Park, built near Victoria, British Columbia, is being used for still another purpose — a staff college for army officers. Now owned and operated by the Department of National Defence, Hatley Park was built by James Dunsmuir, one-time Premier and later Lieutenant-Governor of British Columbia. He named the grounds, with the beautiful residence, miniature lakes and spacious stables and garage, after an estate in England.

The era of castle-building in Canada has ended. But the products of that era—the castles—serve Canadians well in a variety of useful ways. □

FINIS FOR FS

**Ontario's 25-cycle
"island" just a memory
as frequency
changeover program
is completed**



ONE of the world's biggest electrical engineering jobs ended on a quiet residential street in the Metropolitan Toronto municipality of Leaside last month.

Five years and three months ahead of the original schedule, Ontario Hydro's frequency standardization program was completed on July 9, 1959. Following brief ceremonies on the lawn of the last house to be changed from 25 to 60 cycles, white-coated changeover crews moved

into the home. There they wrote finis to the job, which cost an estimated \$360,000,000, and covered a large segment of Southern Ontario and a small section of the northeastern part of the province.

O.M.E.A.—A.M.E.U., electrical industry, with municipal and Ontario Hydro representatives joined in the ceremonies at the home of Mr. and Mrs. A. A. McMichael, the last customer to be changed over. Also attending were Mr. and Mrs. R. E. Taylor and their daughter, Valerie, of East York Township. Although the frequency changeover project did not officially begin until October, 1949, the Taylor home was the first to be standardized as part of a preliminary test program in May of the same year.

Ontario Hydro Chairman James S. Duncan and Bert Merson, chairman of the Toronto Electric Commissioners and O.M.E.A. president, jointly pressed a button on a panel on the front steps of the McMichael



home to turn off a bulb using 25-cycle frequency and illuminate a second with 60 cycle power.

Acting as master of ceremonies, Mr. Merson congratulated employees of Ontario Hydro, the municipal utilities and Canadian Comstock Limited and other contractors for "a magnificent job well done."

Largest in World

Mr. Duncan termed frequency standardization "the largest electrical engineering program of its kind ever carried out anywhere in the world."

Calling it a "first-rate investment in progress," Mr. Duncan said that "during the next two decades, the savings made possible by the standardization of electricity in Ontario will approximate the entire cost of the job."

"These savings will have the long-term effect of helping us to keep our rates among the lowest in the world," the Hydro Chairman added.

Mr. Duncan noted that new changeover techniques and methods

developed during the program had reduced its total cost by an estimated \$40,000,000.

Toronto's Mayor Nathan Phillips, a Toronto Electric Commissioner, said that, despite the cost of the changeover in Toronto, average kilowatt-hour costs to customers were slightly lower than they had been in 1937.

"This is evidence that Hydro is being conducted on a business-like basis," he said.

Following the ceremonies, the 85 guests attended a luncheon at the Leaside Memorial Community Gardens. Speakers at the luncheon were Mayor Charles Hiscott, Leaside, and C. C. Rathgeb, president of Canadian Comstock.

Mr. Hiscott said he had not received a single complaint during the time frequency standardization was going on in Leaside.

Mr. Rathgeb paid tribute to the foresight of Robert Saunders, the late Hydro Chairman who was a strong advocate of frequency standardization.

"Had the program not been started in 1949 it would be utterly impossible to carry it out today. The cost would be fantastic," Mr. Rathgeb said.

During the frequency standardization period nearly seven million frequency sensitive appliances were changed over for more than one million customers.

Although all speakers outlined the economic advantages to Ontario of frequency standardization, its completion had special significance for the three young sons of Mr. and Mrs. McMichael, the last customers.

Recently, Mr. McMichael decided to try some home barbering but he was forced to buy a pair of 60-cycle electric clippers because 25-cycle ones were not available. This meant he had to "borrow" some 60-cycle electricity from a neighbor every time he wanted to cut his sons' hair. Frequency standardization has eliminated the problem.

—by P. J. Maitland

AT A SHY three years old when her parents' home became first changed over to 60-cycle power during a preliminary program in May, 1949, Valerie Taylor and her mother, Mrs. R. E. Taylor, were presented with a clock by the late Bert H. Saunders, Hydro Chairman at the time (below). Now a comely 13-year-old, Valerie and her parents receive a program from Chairman James S. Duncan to mark completion of program (left).



DURING final changeover operations in Leaside, Toronto suburb, Mr. Duncan and Chairman Bert Merson, Toronto Hydro, watched a standardization technician, Donald Green, make adjustments to a home freezer unit.



WHILE DELEGATES WERE ASSEMBLING, two district executive members: C. N. Swayze, Welland, (left), and President C. R. Buss were discussing the program.



PAYING REGISTRATION FEES is no novelty for O.M.E.A. President Bert Merson (left) judging by his philosophical expression. Other delegates wait to hand their cash to H. Coolidge Brantford Township, and Secretary-Treasurer H. A. Howard.

BUSINESS BEFORE PLEASURE

HOT water heaters, power rates and sales techniques triumphed over beach distractions as members of O.M.E.A. District 5 stuck to the agenda of the annual summer meeting held in the resort community of Port Dover on Lake Erie.

The subject of increasing competition was introduced by W. Ross Strike, Hydro's first vice-chairman. Under the heading, "Old Dogs Learn New Tricks," Mr. Strike described a recent visit of municipal and Ontario Hydro representatives to Detroit Edison Company headquarters to study the sales promotion methods being used by that company to maintain and advance its competitive position. In relating them to the local situation, he urged that each municipal utility commence with its own staff, impressing on each employee the need to shoulder sales promotion as an important and continuing part of their duties.

Turning to direct selling, Mr. Strike said that Ontario Hydro is expanding its sales staff and that it is prepared to provide every possible assistance to the municipalities. At the same time, he expressed the view that local conditions must dictate methods and that the actual "pavement pounding" must be the duty of local representatives. He stressed the need for establishing direct contact with local building contractors, even if it meant hiring extra personnel.

Hydro Leadership

Acknowledging that vital load building objectives can only be achieved by a co-operative effort on the part of the entire electrical industry, Hydro's First Vice-Chairman stressed that leadership must come from Ontario Hydro and the local municipal utilities. He also reminded his audience that municipal utilities should actively promote the use of new household appliances

since studies indicate that 10 per cent or less of their connected load normally appears on the utility's peak.

In describing the need for a practical load-building program, I. K. Sitzer, Hydro's newly-appointed assistant general manager, production and sales, said that the conditions which had led to the present low resale rates were changing. He named rising costs, increasing competition and dwindling hydraulic resources as factors tending to increase costs. He quoted figures to show that the annual average rate of increase in the kilowatt-hour consumption by domestic customers declined in 1958.

To remedy the situation, Mr. Sitzer urged the municipal utilities to plan a program tailored to the needs of their systems, to make sure their rates were as low as possible, consistent with good service, and to enlist the aid of each staff member in promoting sales. He emphasized

SALES PROMOTION MAIN TOPIC AT O.M.E.A. DISTRICT 5 MEETING



THESE DELEGATES (left to right): Mayor Harold Schneider, Port Dover; John Irvine and Dr. V. S. Wilson, Etobicoke Township, and Mark Kriluk, Port Dover, appeared to be completely absorbed in the business at hand.



ONTARIO'S RAPID DEVELOPMENT was traced by Hon. James N. Allan, guest speaker. Other head-table guests were (left to right): Roy Pierson, Brantford Township; Ontario Hydro Commissioner D. P. Cliff, Mayor Schneider, President Buss, and Hydro's First Vice-Chairman Ross Strike.

the need for vigorous efforts in building up the water heater load, which he described as the "most vulnerable."

Electric Heating

The meeting also received an up-to-the-minute report on the status of electric home heating in Ontario by Gordon McHenry, manager of Hydro's residential sales department. At the present time, he said, there are 50 electrically-heated homes in the province, 285 more are under construction, while several commercial installations are being made in schools, apartment buildings, and motels throughout Ontario.

Mr. McHenry described the industry-wide Triple Seal program of electric home heating, sponsored by Hydro with A.M.E.U. approval, as the focal point around which future promotion will be centred. He said the program has two objectives—to protect the municipal utilities and

their customers against low-quality electric heating installations, and to provide an incentive to home builders and electrical contractors. The Electric Heating Association of Ontario will set the Triple Seal standards, and the program will be initially implemented through the regional offices of Ontario Hydro.

A brief run-down of the legal relationship existing between Ontario Hydro, the municipal Hydro systems, and the statutes under which they operate was given by Lorne R. McDonald, Hydro's general counsel. His remarks were followed by a lively question-and-answer period.

Reporting on behalf of the O.M.E.A. parent body, President Bert Merson, Toronto, announced that a northeastern district appeared certain to materialize as 12 or 13 municipalities have signified their willingness to join. Greetings from the A.M.E.U. were extended by D. M. Seath, vice-president, Stratford.

District 5 Chairman C. R. Buss reluctantly announced the resignation of Roy Pierson, Brantford Township, second vice-president, whom, he said, has always been among the district's most active supporters. Mayor Harold Schneider, Port Dover, was named as his successor.

The only resolution submitted at the meeting was defeated by a standing vote. It called for Ontario Hydro to "return to the principle of supplying power at cost." Speaking in support of the motion, W. B. Elliott, St. Catharines, used fuel oil distributing methods to illustrate what he called the unsound economics of uniform power rates, which pooled the cost of transmission.

At the invitation of Ontario Hydro Commissioner D. P. Cliff, delegates unanimously approved a motion to hold the 1960 annual meeting at Dundas Ont.

Don H.

FROM WAR TO PEACE

Naval technique is used as Hydro engineers build "mock-up" control room



GENERAL VIEW of the prototype control room to be installed at Hydro's Lakeview Generating Station. Here three Ontario Hydro employees: Margaret Arthur (left), Ralph Lenoff and Mrs. Gwen Collins (right) are receiving a briefing from H. S. Dennis, thermal generation engineer. The instruments shown in the foreground (they are actually scale photo enlargements) relate to boiler control, while those in the background are associated with turbine control.

A WARTIME technique used in the training of sailors on land for service at sea is being effectively employed by Ontario Hydro in planning the layout of instruments to be incorporated in the "nerve centres" at the thermal-electric Lakeview Generating Station being built just west of Toronto.

The application involved the building of an exact scale "mock-up" of one of the Lakeview control rooms, which will be equipped with the most modern instrumentation, including television circuits to permit observation of certain operating conditions.

The project was undertaken with the idea of not only saving time

and money but to thoroughly familiarize all concerned with the plan of the control rooms and the arrangement of instruments. Credit for its planning and execution is shared by the Commission's thermal generation and generation design engineers. Construction of the "mock-up" was completed in one of the buildings at Hydro's A. W. Manby Service Centre at Islington. It is realistic to the point where the visitor's first impression is that of being in an actual control room with all instruments and clocks marshalled in an impressive and symmetrical array on wall panels and on consoles. On approaching the "instruments", however, the visitor is, to say the least,

rather surprised to find that they are photographs. Each is an actual-size enlargement of an instrument and each is in its correct position.

H. S. Dennis, the Commission's Thermal Generation Engineer, a former officer in the British Navy, recalled the important wartime role of "mock-ups" in familiarizing land-trained sailors with the instrument layouts in battleships and submarines. In this connection, he pointed out that the Commission's operators, after studying the control room "mock-up," would be able to walk into a completed control room at the Lakeview plant, when the time comes, and go to work immediately. At the same time, the "mock-up" effectively supplements detailed plans by providing a "visual layout" for the guidance of those who will be engaged in installing equipment at the new station, which will be one of the largest of its kind in the world.

The Lakeview station is now under construction on a 128-acre site at the former Long Branch Rifle Ranges in Toronto Township. It is expected that it will be in initial service by 1961 and that it will have been completed by the late sixties with a capacity of 1,800,000 kilowatts and at a cost of \$250 million. When completed, it will have three control rooms. Two generators will be controlled and operated from each of these rooms.

The "mock-up", now being used as a "pattern" in relation to these rooms, embraces an area of 2,000

(Continued on page 34)

Symbol of Unity



"This stone bears witness to the common purpose of two nations, whose frontiers are the frontiers of friendship, whose ways are the ways of freedom, and whose works are the works of peace."

The touch of a Queenly hand upon a golden cord, and these simple words, imprinted in bronze upon a vast backdrop of glistening black Peribonka granite, stood emblazoned as an enduring symbol of North America's unity.

The unveiling of the "International Friendship Monument" astride the Canadian-United States boundary line by Her Majesty, Queen Elizabeth II, on June 27 this year, was a triumphant moment in the long history of the St. Lawrence Power Project. Expressing her pride in the unveiling of the impressive memorial and in the accomplishments of her Canadian people, the young monarch also voiced the hope that "this example of international co-operation may prove infectious. I hope and pray that it may bring the day a little closer when all the nations of the world may turn away from the fortifications of fear to work together in the ways of peace, and all men may share in the dreams and accomplishments of their brothers."



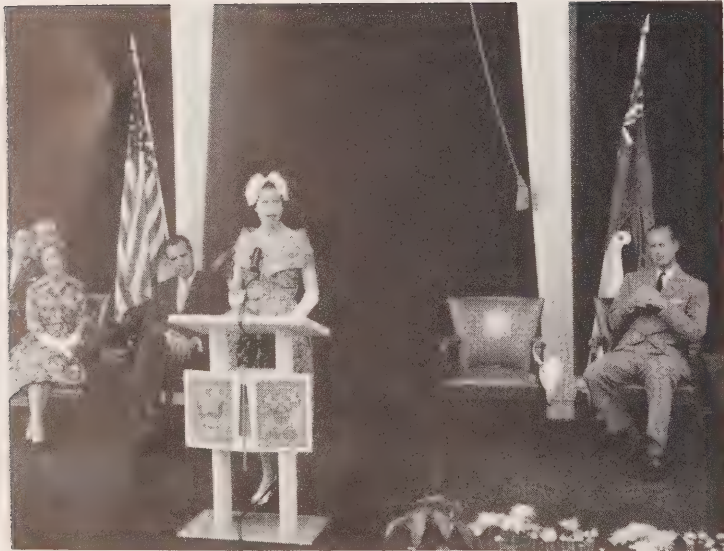


The brief ceremony at the point where the two powerhouses of the \$600,000,000 St. Lawrence Power Project adjoin was a highlight in the one-day visit of Queen Elizabeth and H.R.H. the Prince Philip to the Cornwall area. Symbolic of the international character of the event, the Royal couple made their first stop on American soil, where they were cordially greeted at the St. Lawrence Seaway's Eisenhower Lock by U.S. Vice-President, Hon. Richard M. Nixon, and Mrs. Nixon, by New York State's Governor Nelson A. Rockefeller, by Chairman Robert Moses, Power Authority of the State of New York, and by many distinguished Canadian and United States citizens.

Moving forward on their fog-delayed schedule, the Queen and Prince Philip paused at the reception area of the Robert Moses Power Dam, where some 500 guests watched as they were formally but warmly welcomed by Governor Rockefeller. Mr. Rockefeller assured the Royal visitors that: "We Americans take pride in the heritage we share with the British Commonwealth, and we realize that our future is indissolubly bound with that community of nations."

After a brief response, Her Majesty, with Vice-President Nixon, signed the Power Authority's guest book before leaving to participate in the unveiling of the Friendship Monument.

Here again a throng of prominent Canadian and United States citizens were awaiting the arrival of the Royal party. For



QUEEN ELIZABETH left her purse dangling from the arm of the Royal chair while unveiling the Friendship Monument. New York State's Governor Nelson Rockefeller, Vice-President and Mrs. Nixon and Prince Philip are also shown.

THERE were pleased smiles as the Royal Couple, with Vice-President and Mrs. Nixon, admired the golden commemorative medallions presented to them after the ceremony. Ontario Hydro Chairman James S. Duncan (right foreground) made the presentation to Her Majesty.



several hours, while drifting fog had swirled and eddied over the power development's massive headworks and finally yielded to the rays of the sun and the auspicious arrival of "Queen's weather," batteries of television and movie cameras had been trained on a rectangular bay on the downstream side of the adjoining Robert Moses Power Dam and Ontario Hydro's Robert H. Saunders - St. Lawrence Generating Station.

It was at this point that Queen Elizabeth, accompanied by Vice-President Nixon, Prince Philip and Mrs. Nixon and other platform guests, alighted for the second ceremony held on the red-carpeted base of Scots-white granite that supports the monument.

They were greeted on arrival by Ontario Hydro Chairman James S. Duncan, master of ceremonies, and Mrs. Duncan, who had preceded the Royal party from the American side of the river.

As a prelude to the unveiling ceremony, Mr. Duncan presented members of the Commission, key management representatives and their wives to Queen Elizabeth and Prince Philip.

Introducing Vice-President Nixon, Power Authority Chairman Moses, who represented the United States entity in the 1,880,000-kilowatt power development, said: "No untoward incidents, no rivalries, no differences of opinion, no disputes



ONTARIO'S Prime Minister, Hon. Leslie M. Frost, welcomed the Royal visitors as they arrived for a reception at Hydro's Robert H. Saunders - St. Lawrence Generating Station.



HUNDREDS of Iroquois citizens were on hand to acclaim the Queen and Prince Philip as they paid a visit to the St. Lawrence village.





have marred a record of co-operation with our Ontario partners almost unprecedented in international affairs.

"May this monument in the very centre of the St. Lawrence dam—marking the international boundary line where two great nations meet—stand as a symbol of our friendship till, as the poet said, all the seas gang dry."

In his brief but eloquent remarks, Mr. Nixon said the new power project provides proof that the democratic world has more to offer than mere opposition to communism.

"We have here an example of what we can offer the free world if we lay aside our differences," he declared.

His sentiments were echoed by Mr. Duncan, who said, "In a continent of vast frontiers, we are opening a new frontier as we harness the power of the St. Lawrence waters for power for the peaceful use of mankind.

"I am sure that our own citizens and our cordial neighbors will pay tribute to all the devoted scientists, engineers and faithful workers who have brought this miracle of engineering into being." Then he asked Her Majesty to unveil the memorial "on this day, which will live in our history, and not least because it has been blessed by your gracious presence."

As the young Sovereign concluded her address, she firmly grasped a golden tasselled cord suspended from the canopy. Slowly the rich, red velvet drapes rolled away to reveal the black granite background on which are mounted large gold-leafed replicas of the coats-of-arms of Canada and the United States. The inscription (as set forth on the preceding page) stands out plainly beneath a slightly wedge-shaped strip of gold-leafed metal marking the boundary line in the centre of the backdrop.

The focal element of the monument is a graceful arch of silvery aluminum, 60 feet high. The arch, with one leg in



AT LONG SAULT, one of the new communities created by Ontario Hydro in the St. Lawrence area, citizens vied for the honor of shaking the Queen's hand.



WHILE visiting Long Sault, she chatted briefly with Mr. and Mrs. Sydney Townley, former Farran's Point citizens.

Canada and the other in the United States, symbolizes a friendly handclasp across the border and the goodwill, trust and mutual respect implicit in such a handclasp.

Flanking the slender, stylized arch, at either edge of the wide platform, stand two stainless steel flagpoles, 88 feet in height, from which fly the flags of the two countries.

To conclude the ceremony at this point, Mr. Duncan presented a miniature golden replica of the monument to Queen Elizabeth, while Mr. Moses made a similar presentation to Mr. Nixon as mementoes of the international event.

Returning to the Canadian shore, Queen Elizabeth and Prince Philip, accompanied by Vice-President and Mrs. Nixon, were welcomed at the Robert H. Saunders powerhouse reception area.

In extending greetings to the Queen, Ontario's Prime Minister, Hon. Leslie M. Frost, assured the Royal couple that, although an unmarked border separates Canada from the United States, "there is no boundary in the accord and understanding between our two countries... no limit to the extent of our friendship and mutual co-operation."

"It is in this very happy environment that we welcome you to our province," the Prime Minister concluded.

Mr. Duncan then invited Her Majesty, Prince Philip and Vice-President Nixon to sign the Ontario Hydro guest book, and presented six workmen, who helped build the power development. Carrying their Hydro safety helmets, the six were greeted warmly by Queen Elizabeth, Prince Philip and Vice-President and Mrs. Nixon.

Ontario Hydro's representatives were electrician Marcel Chart-rand, 29, who started on the project in October, 1955, and Irwin Bender, 24, who has worked on the St. Lawrence as a laborer since October, 1953.

After the presentation, Queen Elizabeth unexpectedly asked to visit the Hydro administration building, and the party, accompanied by Chief Engineer, Dr. Otto Holden, inspected the development from the penthouse.

It was a busy event-filled day for the Royal guests. Next on their itinerary, they journeyed to Cornwall along a citizen-lined route to the city's Athletic Grounds, where thousands of district and local school children waited to accord them one of their most enthusiastic greetings of the day.

It was the same, too, as the regal party journeyed westward along the Ontario shores of Lake St. Lawrence above the power development.

Here they received tumultuous acclaim from many of the 7,000 Canadians who moved their households for the power and seaway projects. The Queen and her consort, in turn, stopped for brief receptions at Long Sault, Ingleside, Morrisburg and Iroquois. En-route, the Royal visitors travelled over the Long Sault Parkway, which links several new islands in Lake St. Lawrence. It was a fast-moving trip, but one which witnessed heartwarming ovations and pauses for brief chats with some of the senior citizens and youthful representatives of these new and well-ordered communities.

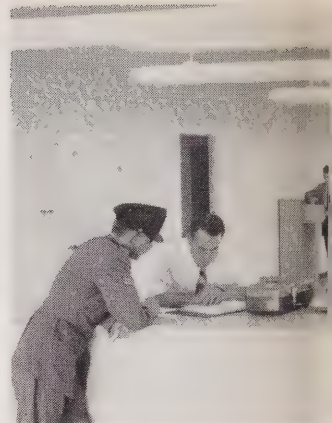
This phase of the Royal tour came to an appropriate conclusion as Queen Elizabeth and Prince Philip waved farewell to hundreds of loyal Canadians from the deck of H.M.Y. Britannia as it steamed westward out of Iroquois Lock.



QUEEN ELIZABETH and Prince Philip came out on deck to bid farewell to the throng of citizens lining the dock as H.M.Y. "Britannia" left the Seaway's Iroquois Lock.



ANOTHER WELCOME ADDITION to the progressive municipality's growing group of civic buildings, the new offices and service headquarters of Trafalgar P.U.C. combine many utilitarian and architectural features.



PLANNING "with an eye on the future" is evident in this view of the utility's general business office.

DESIGNED FOR TOMORROW

Trafalgar Township inaugurates handsome new utility building

Room for expansion is the keynote of the handsome new office and service building recently inaugurated by Trafalgar Township Public Utilities Commission.

It was only 13 years ago that this progressive utility moved into a new building—and there was doubt that the township needed such a large structure. At that time the peak load on the Trafalgar Hydro system was only 1,000 kilowatts.

Then came the amalgamation of three adjoining electrical utilities and with it came soaring electrical requirements as new housing developments sprang up and commercial enterprise expanded — growth that more than justified the faith and the foresight of Trafalgar's util-

ity commissioners and staff of a decade ago.

By the end of 1958 the peak had reached 18,000 kilowatts while the number of customers had grown from 660 in 1946 to a figure of 5,600. And so this expansion—evident in most communities along Lake Ontario's shores—has found expression in this burgeoning municipality's new utility building designed to meet the needs and requirements of continuing growth and increased per capita use of electricity. As W. Ross Strike, Ontario Hydro's first vice-chairman, said at the official opening ceremonies on June 19: "Every customer is using twice as much electric power as he did a decade ago. In 1946, the average monthly consumption per

domestic customer was 219 kilowatt-hours; in 1958 it was 534 kilowatt-hours."

Hydro's First Vice-Chairman discussed briefly the history of the utility, and congratulated its present Manager, Harvey Philip, who has watched it grow for 17 years.

In conclusion, Mr. Strike told the assembled township residents: "In years to come, you will be proud of this structure. You will never be sorry it was built."

Cut Ribbon

Gordon W. Leaver, Trafalgar P.U.C. chairman, and Mr. Strike jointly cut the ribbon to formally open the new building.

Bert Merson, O.M.E.A. president, brought greetings and congratula-



...LY OFFICIATING at the opening ceremonies, Ontario Hydro's First Vice-Chairman Ross Strike and Trafalgar Chairman Gordon W. Leaver cut the symbolic ribbon.



MEMBERS of the Trafalgar Commission try out the new board room "for size." From the left are: Manager Harvey Philip, Reeve F. A. Phillips, Mr. Leaver, Commissioner P. J. Blundy and Jack Morris, office manager.



ROW

ity headquarters



AT THE REAR of the new building, members of the line and water department staffs proudly line up in front of the Trafalgar utility's growing fleet of trucks and other service vehicles.

tions by declaring: "It is a wonderful thing to see new utility buildings being built across Ontario. We have two things to sell: electricity and service. And service is more important."

Others participating in the ceremonies were: Ontario Hydro Commissioner D. P. Cliff, Adam Smith, manager, Toronto Region; Ray Pfaff, A.M.E.U. president; Reeve Alex Phillips, Trafalgar Township; Commissioner P. J. Blundy; and D. B. Ireland, consumer service engineer, Toronto Region.

Following the ceremony, guests and visitors inspected the one-storey, office and service building, which has a total floor area of approximately 23,000 square feet.

Constructed of steel and concrete, it houses the general offices, soundproof billing rooms, an attractive board room and office for the manager, a meter department, stores department and a large garage with repair bay. The main structure also has separate lunch rooms for inside and outside staffs and a locker room. The present staff consists of

nine office personnel and 40 other employees. There are 16 vehicles in the truck and car fleet, which is equipped with two-way radio for fast communication and service. At the rear of the building is a large parking area for employees and a smaller one for customers.

The modern new structure, located on the 7th line, is adjacent to other Trafalgar Township civic buildings in an area which is expected to become a municipal centre in the future.

by Joan MacLean.

EXPAND PUBLIC RELATIONS

AS A FURTHER step in expanding its important customer relations and information program, Ontario Hydro has appointed information officers to serve on the staffs of five of its strategically-located regional offices.

Under the supervision of the regional manager, these information officers will be responsible for the presentation and direction of public relations activities for their respective regional offices and for all Ontario Hydro rural area offices within the region. Their services will also be made available, on request, to any municipal Hydro system within their territory to prepare and present information, undertake assignments and carry out specific projects for the local utility as a means of stimulating interest, as well as fostering and maintaining public goodwill for both the municipal and Ontario Hydro organizations.

Already serving in this capacity are: William R. Caesar, Northeastern Region; William J. Killough, Eastern; Charles G. W. MacIntosh, Toronto; Robert J. Smart, Western, and Leo E. Vamplew, West Central.

WILLIAM R. CAESAR

William R. Caesar joined Hydro's Frequency Standardization Division in 1949, and spent the next eight years with this division, serving successively as test inventory technician, test inventory supervisor, appliance technician, field publicity

specialist, field publicity officer and service supervisor.

He joined the Information Division and became an assistant information officer at Head Office in January, 1958.

Born in Fergus, Ont., Bill was educated in Simcoe County. During World War II he served with the Royal Canadian Navy as a signalman and trained operator. His experience, previous to joining Hydro, included work as a radio assembly foreman and quality control inspector with Addison Industries Limited. Mr. Caesar is married.

WILLIAM J. KILLOUGH

William J. Killough joined Ontario Hydro in September, 1953, as chief guide at the Sir Adam Beck-Niagara G.S. No. 2 project.

Subsequently he became chief guide at the Niagara Remedial Works project and later at the St. Lawrence Power Project. Prior to his recent appointment, Bill was an assistant information officer for the St. Lawrence rehabilitation program and also at Head Office in Toronto.

Before joining the Commission, he was a radio news editor and broadcaster at Niagara Falls, Ont., and at Guelph. Born in Bellshill, Scotland, on December 13, 1928, Bill was educated at Niagara Falls, Ont.

A member of the Ottawa Electric Club, Mr. Killough is interested in high-fidelity, collects records and is

active in choral work. He is married and has three daughters.

CHARLES G. W. MacINTOSH

Charles G. W. MacIntosh, joined Hydro in October, 1948, as senior journalist, later becoming supervising journalist at Head Office.

He has served as an information officer in the Niagara Region and at the St. Lawrence Power Project. Prior to his recent appointment he was information officer for Toronto and Niagara Regions with headquarters at Head Office.

Born at Niagara Falls, Ont., Charlie attended Niagara Falls Collegiate, the Ontario Agricultural College in Guelph and Niagara University, where he studied business administration.

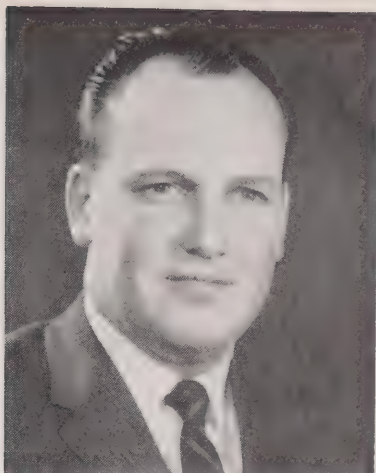
Before beginning his Hydro career, he was Telegraph and District News Editor, Niagara Falls Evening Review; Assistant Editor, Niagara Falls (New York) Gazette; and Editor, Daily Commercial News, Toronto.

He is married and has three sons. He is a member of the Kiwanis Club and lists photography as his chief hobby.

ROBERT J. SMART

Robert J. Smart joined Hydro on September 10, 1956, as assistant special events officer. He became an assistant information officer at Head Office, in December, 1957.

PROGRAM



WILLIAM R. CAESAR

Ontario Hydro names regional
information officers as
first step in an important plan

Born in Toronto, Mr. Smart was educated at Upper Canada College and later studied business administration at the University of Western Ontario. Prior to joining the Commission, he was immigration counsellor at Ontario House in London, England.

A member of the Royal Canadian Yacht Club, Mr. Smart is interested in sailing, skiing, music and travel. He is married and has two children.

LEO E. VAMPLEW

Leo E. Vamplew, previously served Hydro as a field publicity officer, Frequency Standardization Division; as domestic and commercial planning and processing superintendent and as an information officer at Head Office.

Born in Montreal, Leo attended elementary and secondary school at Whitby, Ont., and obtained his B.A. from the University of Western Ontario in 1950. He was associated with DeHavilland Aircraft, Toronto, before joining Hydro in August, 1950.

During World War II, he served with the Canadian Armored Corps and the Royal Canadian Dragoons in Europe.

Leo's special interests include hunting, camping, golf and bowling. He is a member of the Niagara District Electric Club and the Home and School Association. He is married and has two children. ■



WILLIAM J. KILLOUGH



CHARLES G. W. MacINTOSH



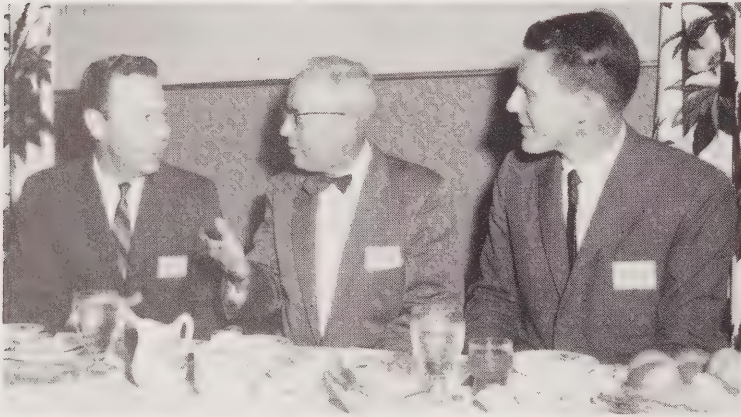
ROBERT J. SMART



LEO E. VAMPLEW



WHAT'S NEXT? Convention executives discuss the agenda. Left to right are: George Phillips, Smiths Falls, secretary-treasurer; Vice-Chairman W. C. Lewis, Ottawa, and Chairman Jack Campbell, Gananoque. Mr. Lewis is Chairman for 1960.



GUEST SPEAKER, Hon. Robert Macaulay, Ontario Hydro's Second Vice-Chairman and new Minister of Energy, chats with Gananoque's Mayor Ian Beresford (centre) and James A. C. Auld, M.P.P., Leeds, during the final luncheon at this year's convention.



DURING a panel discussion on fringe benefits, the subject of coffee breaks came up. Panel members decided to illustrate the point and took one. From left are: Jack Shenton, Barrie; Geo. Huston, Barrie; Harvey Bongard, Orillia, and Stewart Holt, Midland.



NOT A SITDOWN STRIKE—Delegates are just waiting on the dock of the Gananoque Canoe Club for the convening of the first session.

EASTERN

Nuclear horizon is un

To ensure future markets for its vast uranium resources, Canada must design and develop nuclear reactors for sale to other countries of the world.

Hon. Robert W. Macaulay, Ontario's first minister of energy and Hydro's second vice-chairman, told delegates at the eighth annual A.M.E.U. Eastern Ontario Accounting and Office Administration Conference at Gananoque that a great struggle is going on for world reactor markets.

"Canada must convince the world that we have the finest system for producing nuclear power at the lowest possible cost. If we can do that we will have won a major battle," he said.

Discussing the future of energy in Ontario, Mr. Macaulay outlined the part to be played by hydraulic nuclear and conventional thermal power resources in meeting the province's electrical needs during the next two decades. He also praised the vital contribution made by the A.M.E.U. to the Hydro organization.

"The nuclear horizon is unlimited. Recent developments make me confident that the day will come in our lifetime when electricity will be generated directly from an atomic unit the size of a water glass without moving parts or the use of steam," the speaker predicted.

Mr. Macaulay's luncheon address marked the wind-up of the two-day conference attended by delegates representing some 45 Eastern Ontario municipal utilities.

Business sessions centred around three panel discussions on utility operation. An innovation at this year's conference was a breakfast "buzz session," which proved so popular

ONTARIO CONFERENCE

ed, Hon. Robert Macaulay tells A.M.E.U. administrative delegates

that delegates urged it be expanded at the 1960 meeting.

Although the facts and figures of utility operation dominated discussions, delegates and their wives took time out for a trip through the Thousand Islands, stopping for dinner at a riverside resort in New York State.

Water Heater Panel

Following registration and a welcome from Conference Chairman Jack Campbell, Gananoque, delegates quickly got down to business. The first panel session, "Water Heating Problems and Policies," was moderated by Alex Bowie, Kingston, with L. F. Dyer, Peterborough; J. H. Borrowdale, Oshawa; E. C. St. Dennis, Brockville, and John Brodie, Ajax, taking part. Panel members outlined experience with water heater programs in their own communities, and then discussed specific problems which had been encountered. Delegates and the panel appeared unanimous in their agreement that electric water heaters were competitive in cost and operation with other sources of energy, constituting an attractive load for municipal utilities. Several speakers voiced the warning that utilities should ensure that customers installed water heating units adequate to their needs. Otherwise, the utility is blamed when the customer discovers he is not receiving enough hot water.

Shortly after the end of the first business session, the group set off on a tour of the St. Lawrence River. Two boat loads of delegates and wives threaded their way through the channels and coves of the Thousand Islands before stopping at the Pinetree Point Club near Alexandria Bay, N.Y., for dinner.

In a beautiful dining room overlooking the river, delegates heard Ray Pfaff, president of the A.M.E.U., extend warm greetings from the parent organization. The after-dinner speaker was George R. Berry, Ottawa.

In an address entitled "Management Looks to the Future," Mr. Berry said: "Businessmen will have to live in a state of continual change. We are all going to live in a world which is becoming increasingly complex... we can cope with it by learning to carry out tasks more rapidly, efficiently and economically."

Warning of the dangers of inflation to the nation, Mr. Berry urged his listeners to play an important role in society as well-informed citizens.

Management representatives, he said, must be leaders rather than bosses.

Buzz Session

Featuring the second session, delegates got to work early with the breakfast table "buzz session." As Rod Ainsworth, Lindsay, session moderator, explained to delegates earlier, it was designed to involve all delegates in discussions about utility practices and policies. One moderator at each table led the discussions, which were based on a questionnaire circulated to each delegate. The questions dealt with office billing, service and accounting procedures. Results of the questionnaire were announced later by Mr. Ainsworth on a percentage basis.

A panel discussion dealt with "Fringe Benefits." Moderator Harvey Bongard, Orillia, defined the subject as "any remuneration to or on behalf of the employee, which is

in addition to the regular hourly wages for hours actually worked."

"Fringe benefits also have been defined," he added, "as the money a bald-headed man pays his barber when he gets a haircut."

Panel members Jack Shenton and George Huston, Barrie, and Stewart Holt, Midland, then listed and discussed five classes of fringe benefits:

Authorized or legal obligations, such as annual vacation and workmen's compensation; social welfare, such as insurance, pension and medical plans; bonus or premiums, i.e., overtime, shift differential and coffee breaks; allowances for automobile mileage and moving expenses, etc., in addition to services and facilities including employee training, parking, medical expenses and cafeterias.

Discussions pointed up the difficulty experienced by utilities in costing these items. But, as Mr. Bongard emphasized in his summation, it is essential that the utility know exactly what fringe benefits cost, since they can range from 15 to 30 per cent of the wage dollar.

The ladies also had their innings when they discussed personnel relations with Misses Rosa Spry, Stirling; Henrietta Wood, Frankford; Anita Hyde, Trenton, and L. C. Beatty, Port Hope, taking part. Speaking from personal experiences in their own offices, the ladies discussed staff, customer and public relations. All emphasized the importance of courtesy, and of giving the customer the fullest information on services provided by the utility.

Concluding the business session, Chairman Campbell announced that W. C. Lewis, Ottawa, had been

Continued on page 36

PORT COLBORNE HYDRO ELECTRIC COMMISSION

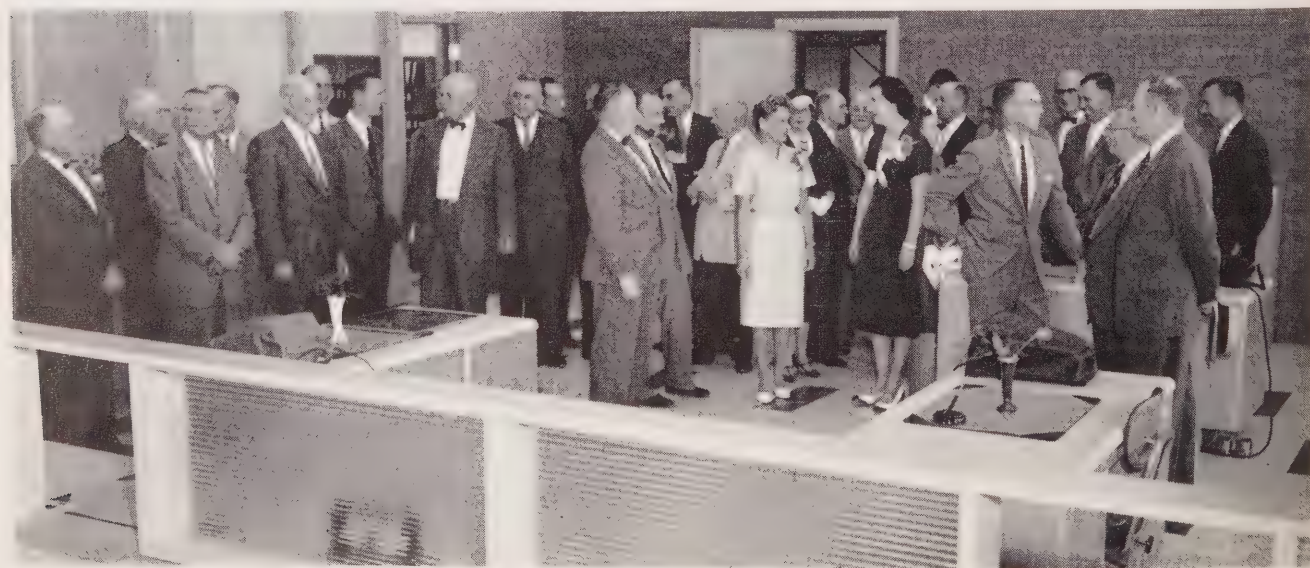
Port Colborne Drives A



BUILT WITHOUT COST to local Hydro customers, Port Colborne's new office building is inspected by (left to right): Mayor H. H. Knoll, Superintendent A. E. Fort and Chairman E. H. Barrick.

FLANKED by Chairman Barrick (left) and Commissioner W. J. Smith, Mayor Knoll declares the building officially open. Also participating in the brief ceremonies were (left to right): Mr. Forl, Niagara Regional Manager J. R. McCullough, Ellis P. Morningstar (M.P.P. Welland); D. T. Flannery, retiring Niagara Region consumer service engineer, and Secretary-Treasurer E. A. Jordan.

MORE THAN 40 guests inspected the bright, air-conditioned offices after the formal inauguration.



mmission

GOOD BARGAIN



THE STAFF LOUNGE has everything! Here Joan Child (left) passes the cream to Elaine Biederman from the compact electric refrigerator during their morning coffee break.



PORT COLBORNE'S Hydro-Electric Commission drives a discriminating bargain.

In a trade that would delight the canniest Scot, the Port Colborne utility recently exchanged its 34-year-old office building for a new, custom-built one—and put money in the bank to boot.

The town's strategic Seaway location at the Lake Erie end of the Welland Canal has helped boost land values. A bank was eager to buy the two-storey building, and the local commission was equally eager to get away from cramped quarters and downtown parking problems. Now everybody's happy, especially the Hydro office staff.

The new single-level building adjoins the service centre, completed last year, making for more efficient and economical operation. Landscaping includes ample parking space as well as attractive flower beds and shrubs surrounding the building. Inside, it's bright, air-conditioned and spacious, with 2,500 square feet of office accommodation.

"I congratulate the commission. The people of Port Colborne must feel very proud of such a fine building," Ellis P. Morningstar, M.P.P., Welland, told more than 40 local and out-of-town officials at the opening ceremonies.

Mayor Officiates

Mayor H. H. Knoll, a member of the commission, officially opened the offices by cutting a white ribbon with gold scissors presented by the architect, Stan H. Butcherd.

"This is an outstanding occasion," said the Mayor.

"Our new building is a credit to the community, and it's wonderful to know that it didn't come out of

revenue. It didn't cost the Hydro customer a penny."

Mayor Knoll, Chairman E. H. Barrick and Commissioner W. J. Smith led the guests on an inspection tour.

Recessed fluorescent lighting and windows extending across the front of the building keep the large reception area and general office bright and cheerful. Adjacent to the main office are the billing room, a fire-proof vault for records, the office of Superintendent A. E. (Art) Fort and a board room which is also Secretary-Treasurer E. A. Jordan's office.

The ladies took special notice of the lounge, which contains cupboards, electric cooking elements, a sink and even a small refrigerator to add a note of convenience to lunches and coffee breaks.

A reception at the Port Colborne Club followed the tour. Among those present: Ontario Hydro Niagara Regional Manager J. R. McCullough; D. T. Flannery, retiring consumer service engineer; Richard Buss, Thorold, president of O.M.E.A. District 5; T. W. Houtby, Welland; John P. Dawson, Dunnville; L. E. Richardson, Merriton; H. A. Howard, Thorold, and Ray Pfaff, president of the Association of Municipal Electrical Utilities.

Mr. Pfaff brought greetings from the A.M.E.U. and St. Catharines P.U.C., of which he is manager.

"This opening illustrates the progress in the public utility field," he said. "The load increases we must meet are terrific, and it's up to us to make sure we can handle them."

"When any utility expands or rebuilds today, the main thing to remember is: make sure you build large enough you have to."

by J. G. Foster

FOTO-NEWS

AWARDS OF MERIT— Went to S. B. Upper, left, and N. J. Lake, Ontario Hydro, for their contributions to the organization of the Council of Metermen's Associations, which became the Metering Committee of the Association of Municipal Electrical Utilities a few weeks ago. In 1950, the two men worked to co-ordinate the activities of the five existing metermen's associations by organizing the Council of Metermen's Associations, composed of two representatives from each separate association. The awards were presented at the Central Ontario Meter Association meeting recently at Atherley, Ont.



WINDSOR WINS—Two Ontario Horticultural Association awards were won by Windsor, Ont., this year, the first time in 25 years the association has presented two awards to the same city in the same year. Mrs. E. G. Carter, director of the association's district 11, presents an award of merit to William Gravett, commissioner of parks, left, for landscaping the civic centre, and to William Anderson, right. Commissioner Anderson accepted the award on behalf of the Windsor Utilities Commission for the Warren P. Bolton Memorial Gardens.



HONORARY DEGREE— Dr. R. W. Ian Urquhart, former director of Ontario Hydro's Medical Services Division, who became Chairman of the Ontario Hospital Services Commission last December, is seen (second from right) following convocation exercises at Queen's University, Kingston, where he received an honorary Doctor of Laws degree in recognition of his contributions to industrial health. With him (from left) are: Dr. W. Ford Connell, head of the Department of Medicine; Dr. W. A. Mackintosh, principal and vice-chancellor of Queen's; and Dean G. H. Ettinger of the Faculty of Medicine (right).

TANGIBLE TOKENS — Three employees of Stratford P.U.C. were honored at the commission's annual banquet recently. Chairman A. D. Simpson, right, presented a watch for 25 years' service with the utility to Duncan MacNicol, second from right. Vice-Chairman A. R. Moore, left, presented pieces of luggage to Bert Snelling, second from left, and to Miss Clara Sproul, both of whom retired earlier this year, to express appreciation of their services.



HONORED — Meter foreman when he retired from the staff of Welland Hydro-Electric Commission recently, Charlie McGhie, second from left, accepts a mantel clock radio presented by L. J. Pearce, Niagara Region, A.M.E.U., Meter Section chairman. Mr. McGhie served 32 years with Welland Hydro. On the right is Robert Young, engineer, Welland Hydro. T. W. Houtby, manager and secretary, Welland Hydro and president of Niagara Region, A.M.E.U., is on the left.



LIFE-SAVING REWARD — Further honors have been accorded Cletus Vestervelt, Picton P.U.C. lineman (second from right) in recognition of his successful resuscitation of an eight-year-old boy, Terry Wannamaker, who was involved in a swimming mishap near Picton in August, 1958. Mr. Vestervelt was presented with a President's medal by the National Safety Council earlier this year (see *Ontario Hydro News* — April, 1959). Expressing the congratulations of Picton P.U.C., Chairman Jack W. Ward (second from left) tendered a \$50 cheque to Mr. Vestervelt for his life-saving effort, in the presence of Vernon Porter (left), Alton Bongard and Foreman Peter Mitchell, of the Picton line staff.



FOTO-NEWS



BURST BALLOON —Remains of an immense polyethylene balloon dangle on an Ontario Hydro high voltage transmission line near the Lakehead. Work crews from Hydro's Northwestern Region are removing parts of the balloon and making temporary repairs to conductors, which were burned by being grounded and short-circuited by the balloon. High winds are believed to have carried the plastic bag across Lake Superior from a U.S. Air Force base.



GRAND VALLEY GROUP — Meeting at Paris this year, members of the Grand Valley Metermen's Association elected a new executive. The 1959 officers are, from left, front row: H. W. Robinson, Brantford Township, secretary-treasurer; R. T. Reed, Guelph, president; W. G. Smith, Hamilton. Second row: A. G. Stacey, Guelph; G. E. Boucher, Paris; Joseph Belbeck, Port Dover; K. R. Baird, Caledonia; J. G. Steiss, Kitchener; and A. T. Smith, Hamilton. R. T. James, Toronto and Earl Moynes, Lindsay, addressed the delegates.



NORTHERN CONCLAVE — Some of the delegates who attended the one-day Northeastern Region A.M.E.U. engineering meeting at North Bay. From left: seated; M. K. Rukavina, manager, Kapuskasing P.U.C. and regional president, 1958-1959; Paul Gravelle, superintendent, Sturgeon Falls H.E.C.; Standing; V. A. McCullough, Toronto H.E.S., one of the speakers; E. J. Peplow, (commissioner) Sault Ste. Marie P.U.C.; B. M. Graham, manager, North Bay H.E.C., elected Northeastern Region A.M.E.U. president 1959-1960; H. R. D. Graham, manager, Ontario Hydro's Northeastern Region.

— (North Bay Nugget Staff Photo)

BIG BUILDINGS POSE PROBLEMS

A.M.E.U., Toronto Region Annual Meeting

TECHNICAL problems facing municipal electrical utilities were given a thorough airing at the recent twelfth annual meeting of Toronto Region, A.M.E.U.

Perhaps the most vexing question facing Toronto Region systems, at the present time, is the provision of adequate service to large apartment buildings. Multi-storied buildings, equipped with elevators, air-conditioning and other new types of heavy electrical equipment are creating loads which require large transformer installations and render the present outdoor type power banks unacceptable.

As a result, the Toronto Region Problems Committee, has prepared a report on standard procedures in the provision and installation of transformation equipment in vaults in apartment blocks. The report was tabled by Chairman Robert Brown, Etobicoke Township, who said that it will be made available to other A.M.E.U. regional associations as part of the overall plan for exchange of information within the provincial association.

Technical aspects of the new Lakeview Generating Station, west of Toronto, were discussed by H. A. Smith, Ontario Hydro's assistant general manager — engineering.

Ray Pfaff, A.M.E.U. president, told delegates of a new electric heating standard, which, it is expected, will be available shortly. The standard, he said, will assist municipal utility engineers in providing high quality residential installations of electric heating.

Delegates approved the report of

(Continued on page 36)

REGISTRATION hit a new level with 123 Toronto Region A.M.E.U. delegates attending the gathering.



HARD HATS EARN DIVIDENDS. Stanley Ford, Toronto Township H.E.C. (centre), was presented with a membership in the Turtle Club by A.M.E.U. President Ray Pfaff (right) as Toronto Township's Chairman G. D. Pattinson looked on. The award recognized the fact that Mr. Ford escaped injury because he wore a safety hat when he fell during slippery weather.



MEMBERS of the new executive got down to 1959 business immediately. Seated (left to right) are: Alfred Edmonds, E. J. Woelfle, past president; President Harvey Phillips; Ronald Morris, secretary-treasurer; George Robertson. Standing: Charles C. Copland (left) and Robert Brown



KENT'S FIRST ALL-ELECTRIC DREAM HOME



ROY WARWICK, president of O.M.-E.A. District 8 and Blenheim utility commissioner, believes in practising what he preaches about Hydro's "Live Better Electrically" campaign. When not working on Hydro business, he's a builder and contractor. And he recently had the honor of completing the first all-electric home in Kent County.

Combining electric heating facilities and the Gold Medallion standard of wiring, lighting and electrical appliances, this new home on Charing Cross Road in South Chatham will provide the owners, Mr. and Mrs. Sam Semkowich, with the latest facilities for modern, comfortable

living. About 2,900 square feet in area, the Roman brick, ranch-style home has three bedrooms, a living room, dining room, large kitchen, two bathrooms, sunroom and separate utility rooms. Baseboard-type electric heating units have been installed. A built-in oven and rotisserie, table top cooking elements which vanish into the wall, and an automatic dishwasher are among the labor-saving electrical devices in the kitchen. Special switches, valance and cove lighting, and outdoor lighting facilities adequately meet the Gold Medallion specifications.

Hundreds of Chatham and district citizens, interested in the home's unusual appointments, witnessed the presentation of the Gold Medallion certificate to Mr. Warwick (second from left) by Alex Kemp, district supervisor of the Electric Service League of Ontario. Looking on were: Lloyd Baltzer, manager of Ontario Hydro's Chatham Area (left) and Mr. Semkowich, who is also shown in the other photograph with his wife at the entrance to the new home. ■

People who belittle you are merely trying to bring you down to their size.

CHANGING PATTERN

(Continued from page 5)

generating capacity will be derived from nuclear sources by 1980, but there seems little likelihood that nuclear stations will supplant conventional thermal plants in the foreseeable future. High capital costs associated with present nuclear plant design and the necessity of high load factor operation virtually preclude this possibility. The nuclear age may be characterized by a ratio of about one conventional plant to one nuclear station unless nuclear peaking stations can be developed.

Fully aware of the desirability of using native uranium rather than imported coal as a source of energy, the Commission is not losing sight of its fundamental responsibility of supplying the electrical power requirements of Ontario by the most economical means available. When nuclear power has been demonstrated to be competitive, it will be developed to the fullest possible advantage. ■

FROM WAR TO PEACE

(Continued from page 16)

square feet. While every detail of the trim, clean-cut layout is to scale, a closer examination shows that the panels, consoles and associated framework are of rough lumber and ordinary wallboard. The vertical and console panels have been painted in an eye-rest green, which is the color scheme planned for the completed control rooms where the instruments will be in a darker green. Along one side, wall or vertical panels extend for 45 feet and, at right angles along another wall, for 26 feet. Some four feet out from the wall panels are the console or horizontal panels. Directly opposite each of these layouts are sections of framework to indicate duplicate groupings of wall and console panels. The scale photographs of the various instruments are, of course, shown only on two of the four groupings in the "mock-up".

by William Rattray

ONTARIO HYDRO NEWS

ALONG HYDRO LINES



FROM THE PROVINCE'S FOUR CORNERS

CITED as the "perfect example of quiet efficiency," Oswald S. Luney, manager of Ontario Hydro's Eastern Region, retired recently with the best wishes of a wide circle of Hydro friends. Some 500 associates from every section of the Province gathered in Ottawa's Chateau Laurier for a complimentary dinner to honor Mr. Luney, who began his 40 years of continuous Hydro service in an engineering capacity in 1919 — during the construction of the Sir Adam Beck-Niagara Generating Station No. 1. The well-wish-

ers included commissioners and other Head Office representatives, all nine regional managers, municipal Hydro representatives, project personnel and pensioners.

Expressing their esteem, Axel M. Pedersen (right in the accompanying photograph), Mr. Luney's successor, presented him with a movie camera and projector. Mrs. Luney (left), was presented with a portable television set by Stores Accounting Supervisor J. L. McClure on behalf of "an appreciative staff."

NUCLEAR POWER

(Continued from page 7)

Other areas in Canada will also need to supplement their present sources of power in the coming years in order to meet the continuing growth in the demand for electricity. For example, by the late 1960s, Manitoba and the Maritimes expect to be installing large power stations of the 100-200,000 kw size. The utilities which foresee a potential application of nuclear power in their systems are anxious for the

first large nuclear power station to be constructed at an early date so that there will be a proven unit when their requirements materialize. Although only about 75 tons of uranium will be required for an initial fuel loading of CANDU, an amount relatively insignificant when the size of Canada's uranium production is considered, the sooner economic nuclear stations are demonstrated, the sooner they will be installed around the world, thus opening up a substantial non-military market for uranium. ■

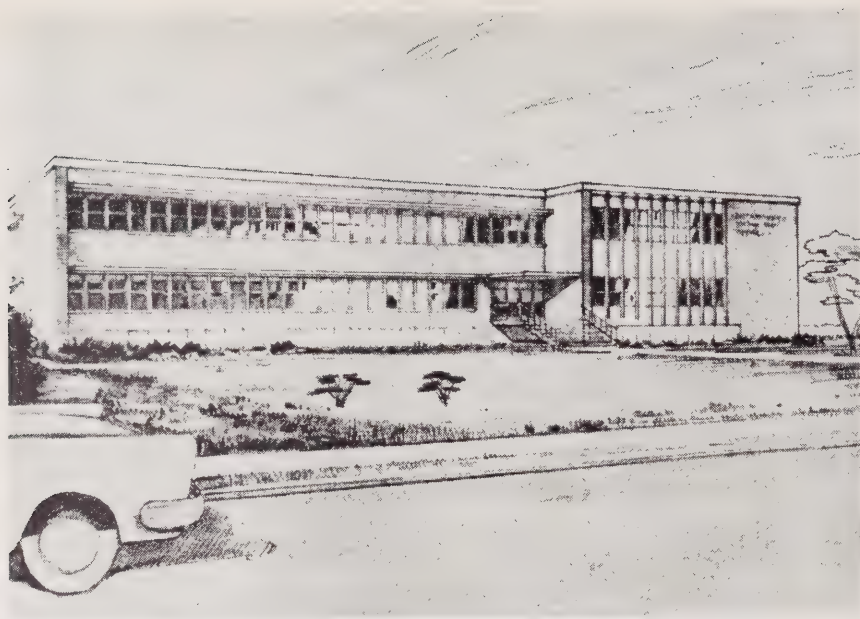
Prime Minister Addresses Oratorical Contest Winners

Prime Minister John Diefenbaker recently addressed 21 Grade IX students who were winners in a public speaking contest sponsored by Port Credit P.U.C., and Toronto Township Hydro.

The students toured the Atomic Energy of Canada plant at Chalk River and the City of Ottawa, including the House of Commons, the Royal Canadian Mint and the Dominion Experimental Farm. They also visited the Ontario Hydro's Des Joachims Generating Station. Winners in Grade Seven toured the Sir Adam Beck-Niagara Generating Station No. 2, Niagara Falls and Fort George, and Grade Eight winners had a trip to the St. Lawrence Power Project and Cornwall.

Long-Service Employee Dies

An employee of Ottawa Hydro-Electric Commission for 40 years, Lucien Charlebois, died recently in hospital after a short illness. He was 64 years old.



Ontario Hydro to Heat New Offices Electrically

Electric heating, which has aroused widespread enthusiasm among Ontario home builders, will be built into new Ontario Hydro offices from now on. Two systems will heat the new Toronto Region building in Willowdale (shown in the accompanying sketch) when it is completed next year. The main portion of the L-shaped building will use a thermal storage system in which water conducts the heat. The

other wing will have resistance heaters.

All new area offices built by Ontario Hydro will also be heated electrically.

Work is to start this fall on the Toronto Region building on Yonge Street just north of Finch Avenue, and the staff is expected to move into it from the present Bloor Street offices in the late fall of 1960. Its two storeys and basement will have a floor area of 42,000 square feet.

Renfrew Plans Storage Dam

A fourth dam on the Bonnechere River in Algonquin Park is planned by Renfrew Hydro Commission to provide additional water for the utility's municipally-owned generating station.

During certain periods, especially July and August, water levels are too low to operate the local plant at capacity. If water is stored in the upper stretches of the river during run-off periods, it can be released when needed.

Estimated cost of the new dam —\$12,580—is included in the commission's 1959 budget. Another dam is planned for 1960.

Campbellford Voters Favor Hydro Contract

Campbellford ratepayers have registered decisive approval of a proposal to enter into an agreement with Ontario Hydro for a supply of power on a contract basis. Voting followed a lengthy period of discussions on the subject during which meetings were held with Ontario Hydro and municipal council representatives, while the matter was laid before the public at an open meeting and by means of press notices. First deliveries of power "at cost" were scheduled for July 1 when Campbellford became the 354th co-operating municipality in the Hydro family.

BIG BUILDINGS POSE PROBLEMS

(Continued from page 33)

the Nominating Committee presented by Chairman Andrew Hamilton, Forest Hill Village, which resulted in the election of Harvey Philip, Trafalgar Township, as president for the ensuing year. Other officers elected were: Alfred Edmonds, Swansea Township, vice-president; Charles Copland, Aurora, Robert Brown, Etobicoke Township, and George Robertson, Ontario Hydro, directors. Ronald Morris, Toronto, was appointed secretary-treasurer.

— by Robert McDonnell.

EASTERN ONTARIO CONFERENCE

(Continued from page 27)

nominated as Chairman of the 1960 convention with John Brodie, Ajax, as Vice-Chairman, and Alex Brodie, Kingston, as Secretary-Treasurer. The nominations were endorsed unanimously.

At the closing luncheon, Mayor Ian Beresford extended a hearty welcome to delegates on behalf of the Town of Gananoque.

The guest speaker, Mr. Macaulay, was introduced by Ross Stiver, Belleville, Chairman of the 1958 conference, and thanked by Fred York, general manager of Ottawa Hydro.

— by P. J. Maitland

Preston Takes Over Hydro Customers

Initial meter readings have been taken for approximately 70 new customers of Preston P.U.C.

The new customers, residents of the area recently annexed by Preston, formerly received their electrical service from Ontario Hydro. Purchase of the rural Hydro facilities was delayed for some time because of difficulties in designating the actual boundaries of Preston.

ONTARIO HYDRO NEWS

A. W. BRADT

ESTEEMED by a wide circle of friends and Hydro colleagues, Andrew Woodre (Andy) Bradt, former Secretary and General Manager of Hamilton Hydro-Electric System, died on June 23 after a brief illness.

Mr. Bradt was born on a farm in Glanford Township in 1888, attending local schools and later the Oregon Institute of Technology at Portland, Oregon.



He worked with the Canadian Westinghouse Company and the Dominion Power and Transmission Company before joining the Hamilton Hydro-Electric System in 1912. He was made General Superintendent in 1916 and Assistant Engineer in 1922. Following the retirement of E. I. Sifton, he became Chief Engineer in 1933 and Secretary and General Manager in 1936. He retired in 1953, but continued to serve in a consultant capacity until December, 1958.

During his long association with the Hamilton utility, he was responsible, to a great extent, for the impressive advances Hydro made within the municipality. He was always active in the work of and on committees of the Association of Municipal Electrical Utilities, which conferred an honorary membership on him a few years ago.

He was a Fellow of the American Institute of Electrical Engineers, one of the charter members of the Niagara District Electric Club, the Burlington Golf and Country Club and the Thistle Curling Club. He is survived by his wife.

TURNING ON THE HEAT

A NEW province-wide association came into being recently when some 90 electrical industry executives met in conference at Casa Loma, Toronto. Known as "The Electrical Heating Association of Ontario," the newly-formed organization is the first of its type to be set up in Canada. The conference was arranged by a planning committee of the electrical heating industry made up of representatives from various parts of the province.

The formation of E.H.A.O. is an important innovation in the rapidly developing electrical heating industry in Ontario. All segments of the industry — manufacturers, distributors, installation contractors and municipal power authorities are uniting in a common cause.

Getting into action immediately, the conference discussed a Triple Seal of Quality, which the association will provide to indicate that the manufacturer and the installing contractor have complied with established industry standards. The plan calls for close co-operation with the building industry.

Electric heating systems for homes are already gaining considerable popularity. New types of heating systems and equipment have been introduced to the market this year. These new developments have furnished fresh impetus to the general "Live Better Electrically" promotion program. A plan to extend comparable, easy-to-maintain systems into commercial and industrial buildings is also well underway.

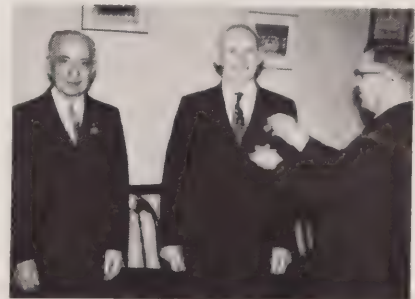


HARRY HUSTLER, left, newly-elected president of the Ontario Chapter, American Right-of-Way Association, receives the local chapter's charter from national president-elect, **F. A. Crane**. Mr. Hustler is Director of Property, Ontario Hydro, and was responsible for Ontario property transactions relating to the St. Lawrence Power Project.

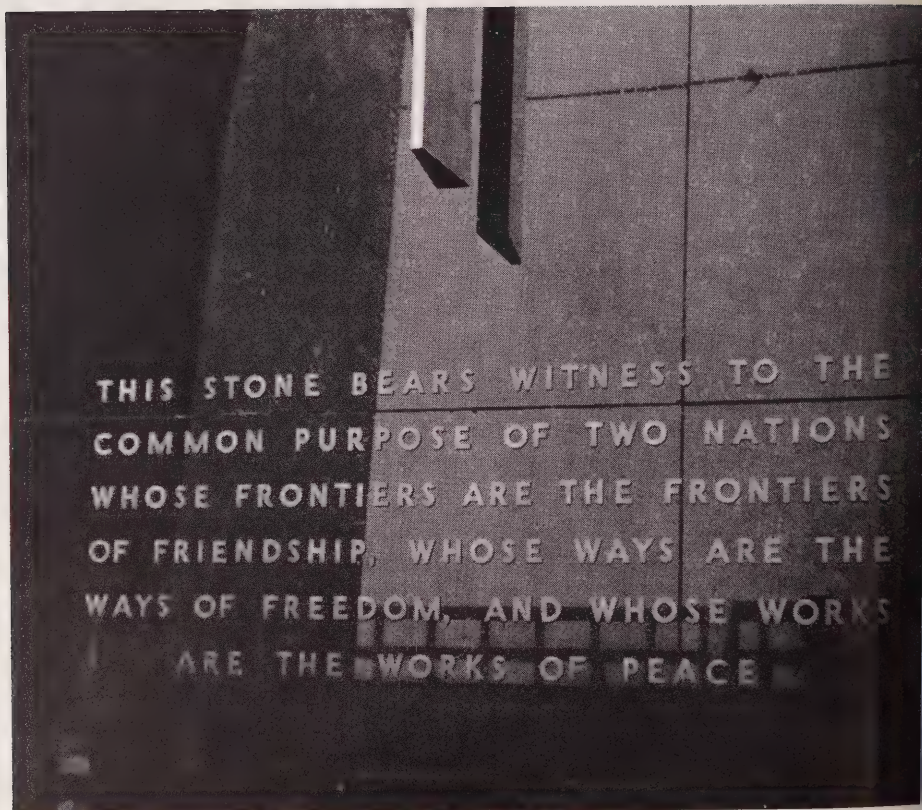
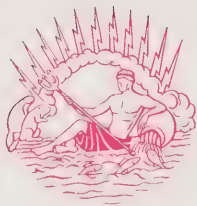
Named Operations Engineer Eastern Region

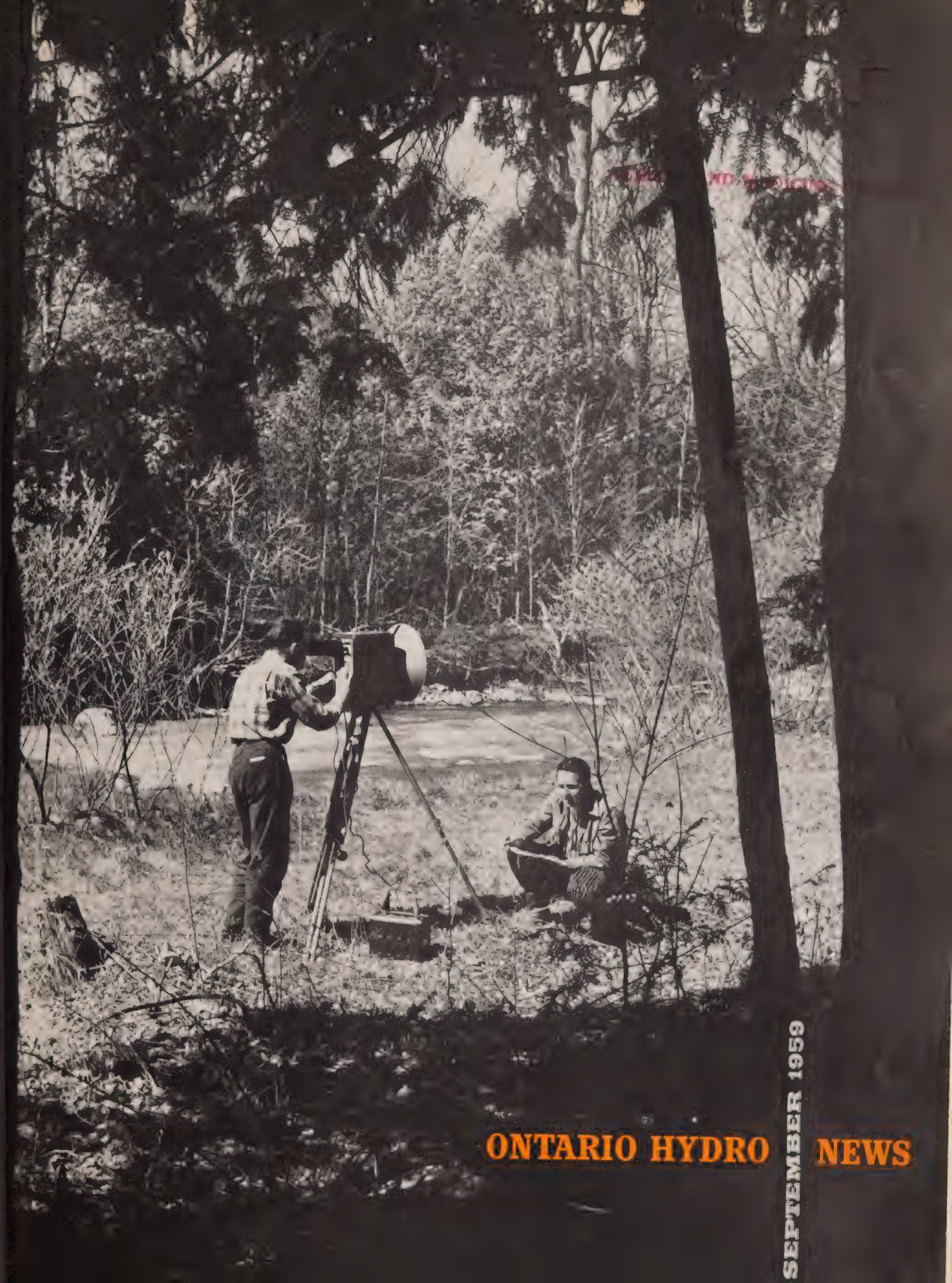
H. T. Turley has been appointed Operations Engineer of Ontario Hydro's Eastern Region, **A. M. Pedersen**, regional manager, announced recently. Formerly Plant Superintendent of the Robert H. Saunders-St. Lawrence Generating Station in Cornwall, he succeeds **Mr. Pedersen** in his new position.

Born in Frankford, Ontario, **Mr. Turley** was educated in Frankford Schools and graduated from the University of Toronto with his degree in mechanical engineering.



HALF-CENTURY JEWELS were presented to **Bro. R. B. Hanna**, manager of Listowel P.U.C. centre, and **Bro. B. L. H. Bamford**, left, in recognition of their 50 years' association with Listowel I.O.O.F. Lodge No. 160. Noble Grand **Elmer Bean** is presenting the 50-year jewels. **Mr. Hanna** has been Manager of Listowel P.U.C. for 37 years and in 1954, a new substation was named in his honor. (Listowel Banner photo.)





ONTARIO HYDRO NEWS

SEPTEMBER 1959

SEPTEMBER, 1959

VOL. 46, No. 9



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THOUSANDS of honeymooners are included among the 350,000 or more visitors who have toured Ontario Hydro's Sir Adam Beck-Niagara Generating Station No. 2 since this plant was officially opened. Crowned by a network of steel "take-off" towers, the sheer, concrete-covered, 300-foot cliffs of the lower Niagara gorge extend below the roof of power-house on which this couple is standing.

ONTARIO HYDRO NEWS

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COVER PHOTOGRAPHS

FRAMED by forest giants, the two Ontario Hydro surveyors depicted in our front cover photograph are operating the new electronic device, the Tellurometer, described in "Monarch of all it Surveys" on page two of this issue.

Congratulations are being extended to E. A. Johnston, of Hydro's Information Division photographic staff. His photograph of precipitator hoppers at the Richard L. Hearn Generating Station, Toronto, reproduced on the back cover, was one of five selected as the best entered in this year's annual photographic competition sponsored by the Engineering Institute of Canada.

SEPTEMBER, 1959

LOOKING AT COLDWATER

ONTARIO'S remaining major hydro-electric sites lie mainly in remote sections of Northern Ontario. They represent a potential estimated at 1,800,000 kilowatts, which Ontario Hydro, naturally enough, is anxious to develop on a progressive basis in conjunction with an integrated program of construction involving thermal and nuclear-electric stations.

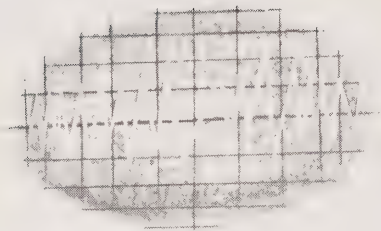
In Northeastern Ontario alone, several hydraulic sites, located some 250 miles north of Sudbury, are estimated to have a total capacity of 1 million kw—more than half the Commission's share of the St. Lawrence power development.

However, a substantial increase in operating voltages will be necessary to ensure efficient operation of the long transmission lines required in linking these remote hydro-electric stations with the province's heavier load centres. Incorporation of extra-high-voltage lines, on the other hand, presents several complex engineering problems on which sufficient information is not presently available, but which must be solved before actual construction of these new power arteries commences.

Thus, Commission engineers have built a one-mile stretch of prototype extra-high-voltage line in a secluded area near Coldwater, Ont., (see page 4) for the purpose of conducting a series of exacting tests and gathering the required technical data. As indicated in the article on this subject in this issue, operating voltages up to 600,000 volts have been reached on the new test lines—some 2½ times more than the highest transmission voltage being used in Ontario today.

As the first alternating current experimental transmission line in North America to operate at this voltage level, the Coldwater project and experiments being carried out there, have attracted the attention of scores of electrical engineers in Canada and many other countries.

Inauguration of the new and important tests is a source of genuine gratification to many associated with the Commission for it serves to re-emphasize Hydro's pioneering role in the power transmission field. For several engineers, both active and retired, the tests have awakened proud memories of a half-century ago when Ontario Hydro — in building its initial transmission lines from Niagara Falls to Dundas to serve the original 14 co-operating municipal systems — became one of the first utilities on the North American continent to transmit electric power at 110,000 volts. ■



*A new electronic device,
the Tellurometer,
is revolutionizing
Hydro survey operations*

MONARCH OF ALL IT SURVEYS

by Horace Brown

IT was rough country, but the tanned Hydro surveyor, like all of his field associates, was accustomed to such conditions.

His practised eye took in the wild and rugged country of the Algoma district. Fringed with poplar and spruce, the worn, scarred hills loomed around him — the waters of the upper Mississagi River surged behind him, restlessly seeking their goal in Lake Huron's North Channel.

But the surveyor's attention was focused on a strange instrument before him. On its spindly tripod, it resembled a miniature television camera.

Muttering something to his companion, the surveyor bent to the instrument; then he spoke a few words quietly and distinctly. Satisfied, he wrote swiftly in his book.

The two Hydro men seemed utterly alone; the quiet sounds of the wilderness only served to accentuate

the impression of loneliness. But some three miles away — beyond the reach of the human eye — a similar instrument had gone into action.

This was the first Canadian field test, applied to engineering surveys, of a remarkable new electronic surveying instrument known as a Tellurometer.

In July, 1958, a five-man survey party, under Resident Surveyor Harold S. Wilde, trekked into the Algoma bushland to test the effectiveness of this new device under the types of field conditions normally encountered in Hydro survey work: steep, high banks; low, flat gravel beds; rocky ridges; heavily-wooded areas; open country and fast water.

The test area covered some 20 miles along the Mississagi River. Using the stadia method of surveying, common to Hydro, a five-man party would have taken 20 working days and two travelling days to com-

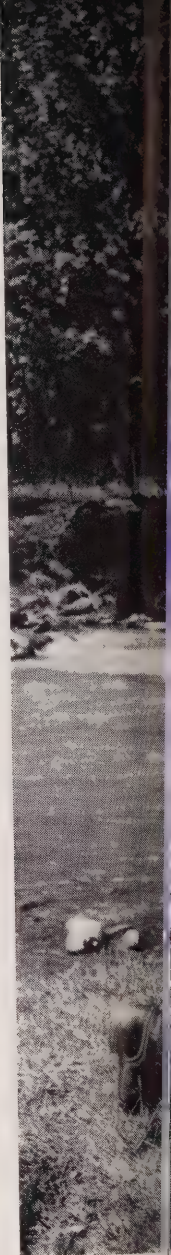
plete this assignment. Unfavorable weather could extend the working period.

Five days later (plus, of course, the normal travelling time), the Tellurometer instruments had completed the task. At the same time, they also proved that they could function accurately under weather conditions that would have halted previous operations.

Accuracy Test

The Tellurometer stood up to the accuracy test, too. The stadia method for similar conditions normally has a record of plus or minus one part in 750. The Tellurometer test indicated an accuracy performance of 1 in 10,000. Later it was learned that ideal terrain and weather conditions increase this ratio appreciably.

The economy of the new elec-





tronic equipment was demonstrated as well. The test survey costs were one-third of a similar project using the traditional method.

Another factor favoring use of the device in Ontario Hydro's wide-spread surveying operation is its weight. Encased in an aluminum, canvas-covered frame, the equipment can be carried through bush country by one man. Easily assembled, it can be operated by the same man, but Hydro sends two men in case of possible injury or sickness while working in a remote location.

(Continued on page 27)

HYDRO SURVEYORS go to work setting up the battery-operated master station near a power site.

THIS OPERATOR converses over a walkie-talkie set in using the auto-reducing theodolite (RDS), which establishes detail at intermediate points, checks Tellurometer findings and is used for other purposes.

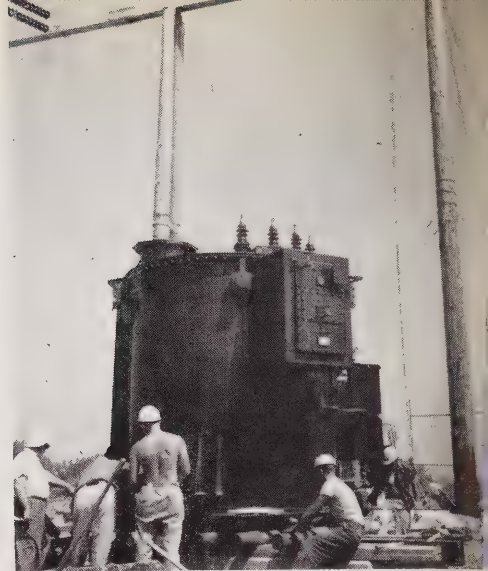


WITH THE MASTER STATION in operation, the surveyor takes a reading while his partyman makes notes. The receiver on the tripod is used to maintain communication with the remote station operator.



CHECKING with the remote station visible across the river. The new surveying device is said to be effective up to a distance of 30 unobstructed miles.





HIGH VOLTAGE

THE lines are sizzling in the vicinity of Coldwater these days and the hot news has to do with Ontario Hydro's extra-high-voltage test facilities — which include the first alternating current experimental transmission line in North America to operate at voltages up to 600,000 volts.

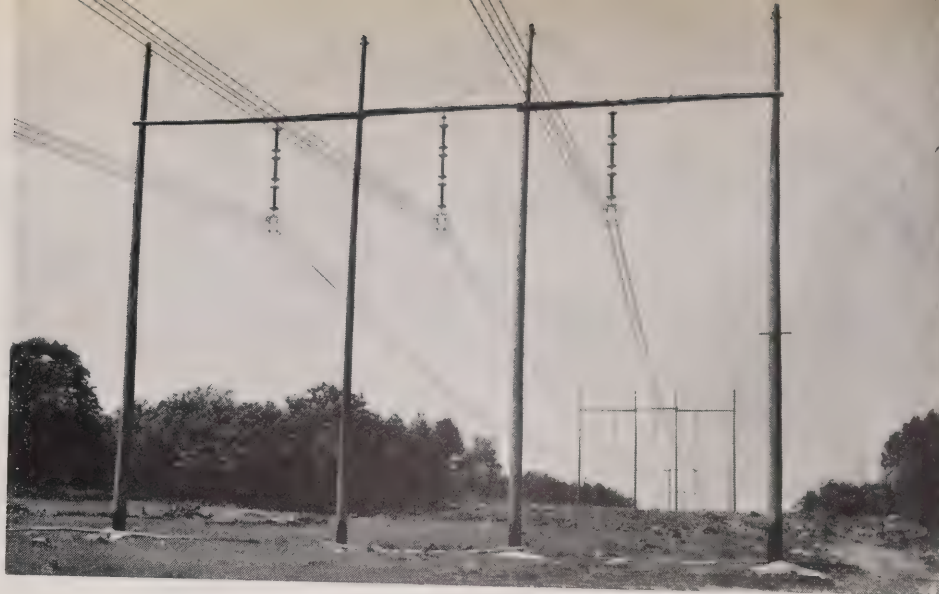
The experiments, now being conducted in a secluded area 20 miles northwest of Orillia, will have an important bearing on the Commission's plan for the transmission of large blocks of power from remote generating stations to built-up areas as far as 500 miles from the source. But the economic transmission of power over long distances is of top importance to the electrical field in general, and Ontario Hydro's EHV program will be closely watched by electrical engineers throughout Canada and in many other parts of the world.

At the Coldwater site, a one-mile stretch of specially constructed EHV test lines has been completed, and operating voltages up to 600,000

TWO of these mobile coupling capacitors are being used at the Coldwater project to measure radio noise. The elongated units are some 25 feet high.

ONTARIO HYDRO NEWS

CONSTRUCTION CREWS install one of the three, single-phase test transformers, which supply power at voltages ranging from 205,000 to 600,000. Each transformer weighs some 30 tons.



THREE BUNDLES of four conductors are encircled by corona shields on the extra-high-voltage test line. The shields are suspended from the insulators. ▷

STAGE HISTORY

volts have already been reached for short periods. This is more than $2\frac{1}{2}$ times greater than the highest voltages now being used for transmission of power in Ontario.

The test lines will now be operated continuously at 500,000 volts for several months to age the conductors. During this period, measurements will be made of corona losses and radio interference. The project was officially turned over to the Research Division, August 12.

The two-year study is directly related to the Commission's plan for the design and construction of an EHV system, originating in the Northeastern Division. Long-term planning for future hydro-electric development includes several sites approximately 250 miles north of Sudbury. The total capacity of these sites is estimated at 1,000,000 kilowatts — more than the Commission's share of the St. Lawrence power development.

To incorporate this power most economically into the system, the

Commission is planning the construction of 230,000-volt lines from the various plants to a gathering station at the Abitibi Canyon development. Present plans call for the building of two extra-high voltage lines, extending a distance of 230 miles from the Abitibi gathering station to Sudbury and over an additional 220 miles from Sudbury to Toronto, with an intermediate switching station at Timmins.

Surveys to determine the locations of these lines have been underway since the fall of 1958. It is presently expected that the first extra-high voltage line, to be operated initially at 230,000 volts, will be in service by the early 1960's with operation at an anticipated nominal voltage of 460,000 expected one to two years later.

Meanwhile, at Coldwater, which was found to be one of the most suitable sites for the tests involved, a wide range of experiments is in progress. For example, the Commission's engineers are studying and

measuring radio interference levels and corona losses for lines having different conductor sizes; multiple conductors per phase (bundled conductors) and various phase-to-phase spacing. These tests are proceeding under typical yearly weather conditions and, as already indicated, at voltages up to 600,000.

Radio interference has long been regarded as one of the limiting factors in the design and building of EHV lines. While the Commission has now reached the point where economy and efficiency of operation require the incorporation of extra-high voltage lines into its system, it is essential that this progressive step be taken in a way which will limit radio noise to an acceptable level.

Although, under extreme weather conditions, corona is visible on the 230,000-volt lines operated by the Commission, this does not constitute a serious factor from the standpoint of power losses and radio inter-

(Continued on page 6)



LINE CONSTRUCTION WORKER installs a three-section Langstab insulator. These new-type insulators were specially imported for the test line.

ference. At extra-high voltages, however, corona becomes a problem, which has to be controlled. Corona, in relation to transmission lines, results from "avalanche" ionization of the air close to a charged surface. On high-voltage lines, corona has to be limited sufficiently so that the levels of its two principal effects remain acceptable. One effect is power loss along a line, as a result of ionization. The other is interference with radio reception nearby, caused by radiated radio-frequency waves that result from the movement of electrons.

Control of corona may be achieved through a combination of factors that will be incorporated in the design of the new lines. These factors may involve the use of corona shields, hardware of special design and what engineers describe as "bundled conductors". In addition, information now available indicates that the line insulation will have to be improved considerably. It appears, for example, that an insulator string 12½ feet long will be required for a 460,000-volt line, as compared with between seven and eight feet for a 230,000-volt line.

By the time all the tests have been completed, the Commission's engineers expect to be able to confirm this and other information required in the designing of the new extra-high voltage lines. While this is the

OFF TO A GOOD START, Ontario Hydro's Engineering Division, represented by Director Harry Leeming (right), hands over the completed line to Research Director Hugh Ross to mark the inauguration of important scientific tests.



ONTARIO HYDRO NEWS

primary purpose for which the Coldwater project is being used, it is anticipated that other problems will be studied as the necessity arises and as time permits.

The use of automation, in the form of an electronic digital calculator to process much of the data, serves to emphasize the highly complex character of the experiments and the advanced procedures being used to obtain information not previously available.

The test line built by the Commission for conducting these experiments is, in itself, an interesting engineering undertaking. It includes two 2,500-foot, three-phase sections of line with wood-pole structures. In this way, it is possible to conduct experiments with two different sizes of conductor at the same time under identical atmospheric conditions. The suspension structures have four ground cables and provide for varying the phase spacing from 24 to 36 feet. The transmission line conductors are supported by single strings of insulator units. Power supply to energize the test line comes through Waubashene Transformer Station, some three miles from the Coldwater site.

The Commission's engineers believe this test project may well influence the entire concept of power transmission. ■



SEPTEMBER, 1959



FROM PEBBLES TO BOULDERS

Site preparations are virtually complete at Ontario Hydro's Lakeview Generating Station being built on the site of the former Long Branch Rifle Range west of Toronto. Work has entered its second stage with the pouring of concrete foundations for the first of an eventual six, 300,000-kilowatt, thermal-electric generators. By the mid-sixties, its 1,800,000-kilowatt capacity will make it the world's largest thermal-electric plant.

Dredging started last month in the dock area. Designed to accommodate some of the largest lake boats now in service, the dock will handle simultaneously the unloading of two, 750-foot long freighters having 27 foot draft. Also under construction is a rock causeway (shown above) which, with the dock, will jut into Lake Ontario some 2,000 feet. To construct the breakwater and causeway, trucks are hauling, from as far away as Niagara Falls, rock ranging in size from pebbles to 11-ton cut stones. The breakwater has the dual purpose of protecting the docking area and with the dock, forming an intake channel which will provide a supply of water to the plant for cooling purposes. ■



THREE DELEGATES, left to right: Leo Cain, Toronto; E. A. Washburn, Burlington, and Howard Graff, Niagara Falls, register complete absorption in one of the papers.

SEAL OF QUALITY

DISTRIBUTION VOLTAGES were discussed by Marino Fraresso, Ontario Hydro (left), and Pierre Duchastel, Quebec City. Presiding chairman at this session was D. K. White, North York Township (right). D. M. Seath, Stratford (second from right), was conference co-chairman.

A.M.E.U. Summer Conference attracts record delegate registration



PROVIDING a concept of the intensive agenda, these papers were presented during the conference. Speakers' panel included, left to right: A. G. Stacey, Guelph; Frank Thomlinson and Elliott McBroom, Toronto; Earl Treen, Ontario Hydro, and E. F. Burbank, Toronto.



AMONG THE SPEAKERS at the opening session were, left to right: G. E. Davidson, Ontario Hydro, who gave a demonstration during his paper on lighting ballasts; W. H. Powell, Peterborough; C. S. Phelps, Sarnia, and Gordon McHenry, Ontario Hydro, Toronto



THIS YEAR'S A.M.E.U. Summer Technical Conference covered many phases of municipal utility operations—ranging in scope from electric home heating to distribution.

And as an indication of the importance of this annual gathering as a forum for electrical utility personnel, some 300 delegates — a record attendance — participated in the discussions.

Held at Bigwin Inn, Lake of Bays, the conference had as its co-Chairmen, John Torrance, Etobicoke Township, and Douglas Seath, Stratford.

After brief opening remarks by President W. R. Pfaff, and a humorous but provocative skit which graphically illustrated the progress in electric home heating within the past year, delegates launched into an exhaustive consideration of the problems associated with this relatively new type of electrical application.

Operating Costs

As Chairman of the association's Electric Heating Committee, H. R. Soutar, Windsor, stressed the importance of assembling reliable statistical data relating to annual operating costs as quickly as possible. His committee, Mr. Soutar said, has joined with Ontario Hydro to make a detailed survey of all residential installations for a period of some two years. He urged municipal utilities to co-operate fully in completing the survey forms being sent out by the Commission's regional offices.

Tracing the steps that led to the recent formation of the Electric Heating Association of Ontario, Mr. Soutar said that agreement has been reached on a division of responsibilities for all segments of the electrical industry:

1—Ontario Hydro and the municipal electrical utilities have two broad responsibilities, i.e., customer satisfaction and promotion; 2—manufacturers and their representatives are responsible for the quality of their products and sales; 3—sup-

pliers or distributors have responsibilities to the industry, the ultimate customers and to the installing contractors; 4—the latter group is completely responsible for customer satisfaction with the entire installation.

Triple Seal Standards

Amplifying Mr. Soutar's remarks, Gordon McHenry, Ontario Hydro's manager of residential sales, said the Electric Heating Association has developed the "Triple Seal of Quality," which will be awarded only to those electric heating installations which meet all the requirements of a standard acceptable to the industry in general. Through province-wide promotion, this seal will receive public acceptance as the measure of quality in electric home heating installations.

"Building contractors will be urged to demand installations which meet the standard represented by Triple Seal so that their homes will be more readily saleable. Installing contractors will, therefore, wish to meet the standards to produce an installation acceptable to the building contractor," Mr. McHenry stated.

The Triple Seal of Quality, the speaker continued, assures the home owner of: a guarantee of installation and workmanship by the contractor; the manufacturer's guarantee, and certification by the E.H.A.O. that the overall installation meets its standards.

In implementing the award of the Triple Seal, it is recognized that a review of design calculations is necessary to certify that the industry standard is being followed. On-the-job construction inspection is necessary to ascertain that insulation, in accordance with design requirements, is actually being used. It is important also to check the workmanship in the installation of the insulation and vapor barrier.

Thus Ontario Hydro's regional sales and inspection staffs will perform the necessary inspection work

Continued on page 10

as a temporary measure until the volume increases to the point where the industry can accept responsibility directly or until the Triple Seal standards are so widely accepted that field inspection will be unnecessary.

The approval will be granted to an installation when the design calculations have been made or checked by the regional sales superintendent, and when the latter has received a report of satisfactory insulation from the electrical inspector. The sales superintendent, on behalf of the E.H.A.O., will then sign the certificate, forward the seal to the contractor, who will also sign it and affix it to the service panel or in a conspicuous location in the building.

"We confidently expect that this program will protect you and your customer against poor installations, and at the same time permit a good promotional effort," Mr. McHenry concluded.

Must SELL The Mouse-Trap

Chairman of the A.M.E.U. Load Promotion Committee, Harold Brownhill, Stamford Township, warned his audience: "No longer is a better mouse-trap good enough—we have to get out and sell the mouse-trap."

Predicting possible increases in Ontario Hydro's wholesale rates in the near future, due to the necessity of producing a rising proportion of power from higher cost fuel or nuclear-electric sources, Mr. Brownhill also forecast greater operating costs for local utilities. Thus municipal commissions must increase their promotional activities to prevent the inroads of natural gas companies on new or existing electrical loads.

Mr. Brownhill cited the trend evident in his municipality as an example of what could and is occurring in other sections of Ontario.

Although Stamford Township's customers have doubled in the last decade, with a parallel tripling of the utility's electrical load, the average domestic energy consumption per customer in 1958 showed a decrease from the previous year owing

to competition from natural gas.

As a result, the Stamford utility has instituted a regular advertising program and adopted a water heater rental program. The latter campaign is producing encouraging results, i.e., 55 new water heaters installed in 19 working days.

"Let's wake up — we have all overslept," he declared.

Encouraging Advice

Delegates received some encouraging advice from Harry Hyde, Toronto Hydro's assistant general manager and first vice-president of the A.M.E.U.

Local utilities, in company with Ontario Hydro, are making substantial progress in coping with the technical problems associated with electric home heating and the promotion of this new electrical application, he said. "When you recall that a year ago there was virtually nothing being done in this field, you recognize how rapidly we have forged ahead," he declared.

Supplementary electric heating, Mr. Hyde continued, "is something that is waiting to fall into our laps," but it will require co-ordinated effort on the part of utilities.

In this connection, he pointed out that electrical utilities have a big potential market in homes with rooms requiring more heat than can be provided by the existing heating system. Installation of electric heating units in these cold rooms is much cheaper than providing extra ducts or pipes connected to the main heating system, he said.

The same economy factors are present in the case of home-owners building additions to existing homes. An additional electric circuit and the necessary heating units cost much less than the expenditure involved in providing connections with the central heating system.

Heat Pump Promotion

Moreover, utilities can profitably increase their energy sales by promoting the use of heat pumps during the late autumn and early spring months. While Ontario's heating period each year is longer than sou-



DURING A LULL in proceedings, A.M.E.U. Secretary-Treasurer W. R. Mathieson (left) was noted in discussion with Alex Radin, Washington, D.C., and I. K. Sitzler, Ontario Hydro. General Manager of the American Public Power Association, Mr. Radin made a brief address, extending greetings to the A.M.E.U.



ANOTHER HIGHLIGHT was the golf competition for the McCracken Punch Bowl Trophy won by Ian Morrison, Toronto (left), and presented by A.M.E.U. President Ray Pfaff.



A SPECIAL PROGRAM was arranged for lady delegates. Mrs. Ray Pfaff, St. Catharines (left), presents a lucky draw prize to Mrs. Gordon McHenry, Toronto, during a ladies' luncheon.

DELEGATES wave farewell from the top deck of the hotel ferry.

thern sections of the United States—where electric heating is particularly prevalent — Ontario home owners should be made aware of the fact that the province's prevailing temperatures during several fall and spring months are similar to the winter temperatures of the southern areas. Heat pump installations would provide sufficient warmth during these periods, and preclude the necessity of operating the more expensive central heating installations. Heat pumps will serve in the dual capacity of air-conditioners during the summer months

Another form of supplementary heating is available in electric blankets, which not only furnish comfort for the user, but produce sales of millions of kilowatt-hours — mostly off-peak, Mr. Hyde concluded.

Electric Water Heaters

Delegates evinced special interest in a report on electric water heaters presented by C. S. Phelps, Sarnia, on behalf of the A.M.E.U. Utilization Equipment Committee. In the committee's view, Mr. Phelps

stated, there appears to be two main problems on water heaters. The first concerns the type of flate rate equipment that will adequately handle the hot water requirements of families of various sizes and living habits.

Dealing with the various phases of this question, Mr. Phelps reported that the committee favored the introduction of a rental plan, where natural gas competition is encountered, to overcome the difference in the initial cost of equipment. Under this plan, the heater is owned, installed and maintained by the local utility.

Turning to the second problem associated with the various factors that control consumer billing for this water heater service, and also the cost of power to the utility, the speaker reported that the A.M.E.U. executive is not prepared, at present, to make any recommendation on equipment selection other than previously-presented suggestions.

Group testing of several installed water heaters, presently being car-

ried out by Ontario Hydro in the London area, appears to be the only practical method of studying the effect of the water heater load on a utility system.

For various reasons, it is anticipated that the tests will necessarily be carried out over an extended period to obtain the most accurate results, Mr. Phelps stated.

This session also featured a well-prepared report relating to the Hendersonville forum presented by W. H. Powell, Peterborough, and an illustrated lecture on lighting ballasts by G. E. Davidson, Ontario Hydro's Research Division.

System Planning

System planning formed the basis of the first afternoon session with D. K. White, North York Township, acting as chairman. Pierre A. Duchastel, Quebec Power Company, presented a paper on higher distribution voltage while Marino Fraresso, Ontario Hydro's distribution engineer, discussed Commission policy pertaining to the adoption of higher distribution voltages.

Mr. Fraresso stated that Ontario Hydro had found use of a higher distribution voltage necessary and economical in rural areas in Ontario; in 1958, only 21.6 per cent of the rural load of 528,000 kilowatts remained at 4.16 kv; 60.6 per cent was supplied at 8.32 kv; 17.4 per cent at 12.48 kv and 0.4 per cent at 25 kv.

Stressing that the adoption of a particular voltage is the responsibility and right of each municipality, Mr. Fraresso said that Ontario Hydro would co-operate in providing the necessary facilities for higher distribution voltage in cases where it appeared that the result would be a significant saving in cost, including both the municipal and Ontario Hydro facilities. Furthermore, Ontario Hydro was prepared to provide assistance in the necessary studies, upon request, to the limit of available resources.

Variety was the keynote at the second day's session when Robert Long presented a paper on the ap-

(Continued on page 28)

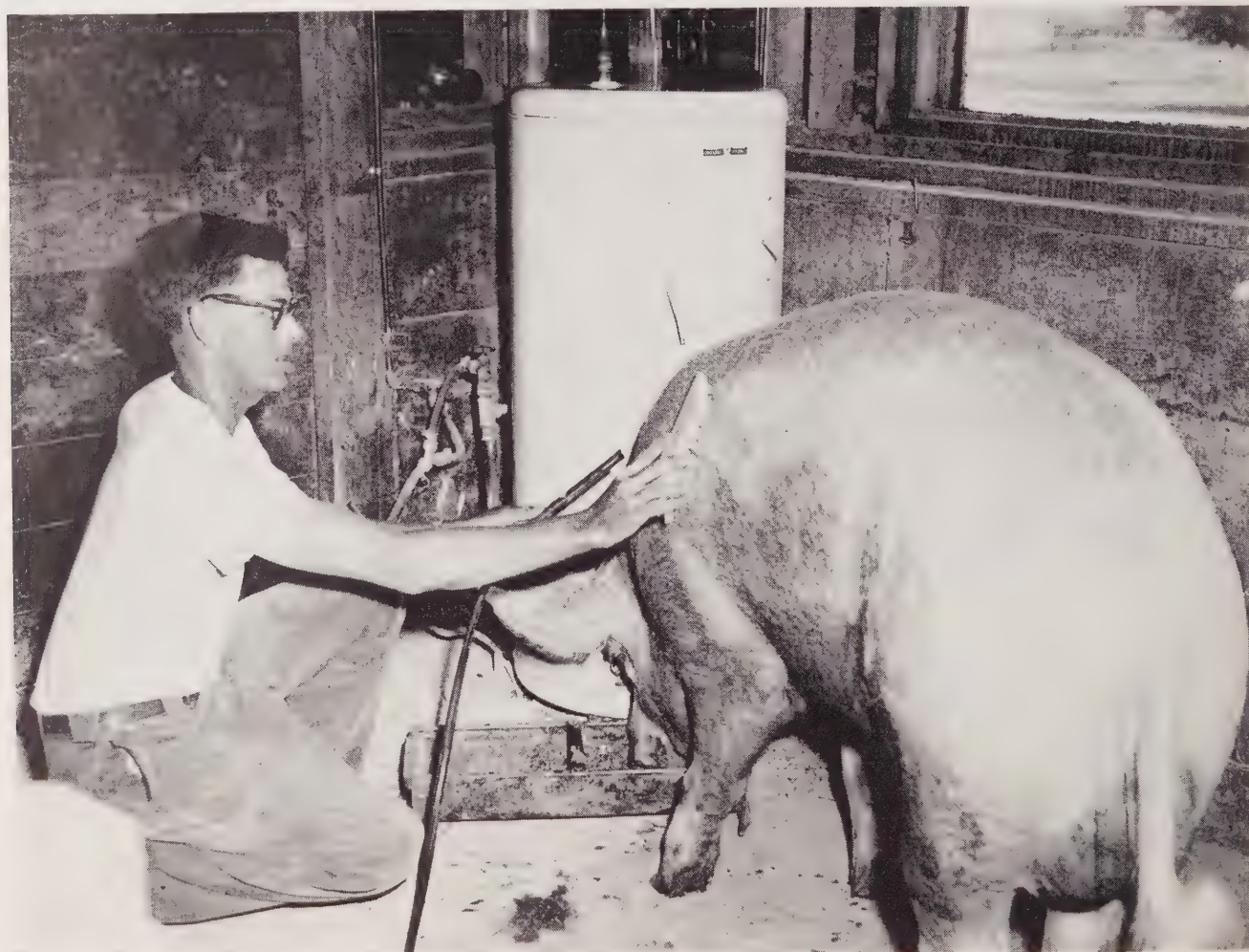


A FARMER "IN HOT WATER"-- AND HE'S HAPPY



JAMES RHODES and his wife, a registered nurse, collaborated in developing "Formula X," which is credited with stimulating growth in pigs and destroying disease organisms.

AN AUTHORITY on hog-raising, Mr. Rhodes lauds the aid of this 30-gallon electric heater which furnishes ample hot water for disinfecting and feeding pigs.





MR. RHODES IS PROUD OF HIS RALEIGH PLAINS FARM NEAR CHATHAM, ONT.

JAMES A. RHODES, R.R. No. 2, Fletcher, near Chatham, is one Ontario farmer who likes being in hot water—especially if it's electrically-heated. Mr. Rhodes, whose family has been farming in Raleigh Township for several generations, specializes in raising swine. Today he is noted among Kent County farmers as an authority on the care and feeding of top quality hogs.

After a three-year research program, this progressive farmer-scientist has developed a new diet for his litters that is literally accomplishing miracles in weight acceleration.

An average eight-week old pig weighs about 40 lbs, although some reach 50 lbs in that time. Piglets at Mr. Rhodes' Raleigh Plains Farm consistently tip the scales at 80 lbs and even higher by the time they reach that age. A recent litter of piglets weighed three lbs each at birth, and 13½ lbs at the end of two weeks! Another litter, increased from three to 130 lbs in 13 weeks.

Mr. Rhodes developed this new

diet, called "Formula X," in association with a Canadian research firm. He announced recently that government approval has been granted to sell the new product commercially. Basically it employs chemicals to inhibit growth of disease organisms long enough to give the pig time to build up its disease resistant antibodies. The incidental benefit is the rapid gain in weight.

Most Economical Method

"Hot water has played an hourly part in the lives of these piglets," stated Mr. Rhodes, "and my electric water heater has proven to be the most economical method of heating this water." He went on to point out that the electric water heater was entirely safe and dependable for use in barns and that it could be installed anywhere, without consideration for venting, drafts, or expensive supply system.

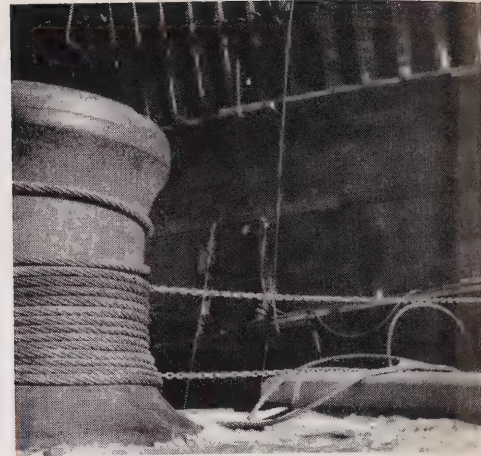
Hot water is necessary for providing hot mash to the piglets, an essential part of "Formula X." Pens

and pigs are washed and disinfected with hot water, both summer and winter, and a 30-gallon, 600/600 watt electric heater maintains a constant supply for the 170 small and 60 large Yorkshires that Mr. Rhodes is raising.

Electricity is also used to operate the air interchange, ensuring constant fresh air in the pens, and in the circulation for the perimeter heating system that Mr. Rhodes uses to heat the buildings. "Even the security of my farm is dependent on electric lights, both inside and outside the barn. The dependable service provided by Hydro has played a large part in my successful operation of this farm," he explained.

Mr. Rhodes feels that this particular application is economical and practical for any farmer and that hot water should be used for most types of feeding. "If you demand hot porridge on a cold morning for yourself, why not provide a hot meal to your animals as well?" he asks. ■

"WE'RE READY"



BY J. G. FOSTER

THE din of a modern shipyard, startling at any time, seems even more ear-splitting when travellers encounter it in the Niagara fruit belt.

But after 30 years in the business, George Cleet carries on a conversation at the top of his lungs as naturally as a wincing visitor would chat quietly in his own home.

"We've had to expand to meet Seaway business," he hollered, waving towards the bedlam around a 717-foot lake ship being built on dry land only a stone's throw from orderly vineyards. "That's why we had to have Hydro service."

George is Assistant General Manager of Port Weller Dry Docks Limited, which signed a power contract with Ontario Hydro last fall. Its electrical load was dictated by an expansion program based on two factors: the firm's strategic location on the Welland Canal's Lock One, and the shipwright's axiom that an idle vessel is a liability. The first, Port Weller officials hope, will give the dry dock a foot in the front door of Seaway trade. The second demands abundant power for fast and efficient work.

Efficient, too, are the 500-odd employees, despite the dry dock's seeming confusion; for this area is

one of North America's oldest ship-building centres, dating back to the early 19th century days of wooden ships.

Founded in 1946

Port Weller Dry Docks Limited was founded in 1946. When it arranged for the use of the docks formerly operated by Canada's Transport Department for emergency repairs to canal boats, it also inherited the Department's power supply from canal turbines.

Even augmented by its own diesel generation, this arrangement was inadequate the firm discovered. It couldn't meet the expansion necessary to handle the large ships which will ply the Seaway, expansion which saw the building dock lengthened from 685 feet to 730 feet and the graving dock, for repairs, from 600 to 750 feet.

And so, in came the new electrical system with benefits reflected through the whole noisy, intricate job of building a ship.

Work starts when the blueprints of naval architect Tom Fisher and his draughtsmen arrive in the mould loft, an enormous room, 278 feet long, which forms the upper storey of the dry dock's main, hangar-like building.

(Continued on page 17)



*Now drawing its power from the Ontario
Hydro network, the bustling Port Weller
Dry Docks Limited, looks forward to a new
era in the Canadian shipbuilding business*



△
APPROPRIATELY NAMED the Seaway Queen, Port Weller's newest vessel was launched a few weeks before the formal opening of the St. Lawrence Seaway, which heralded a new era in water transportation.

AERIAL VIEW of the Port Weller shipyard on the Welland Canal. In the graving dock (right), one ship is under repairs, while construction is starting on the Seaway Queen (above) in the building dock.





THIS HUGE electrically-operated gantry crane, capable of lifting 125-ton loads, is moving a boiler into the hull of a new Port Weller ship.



THE MOULD LOFT is one of the largest in North America. Here wooden templates are made and used as patterns for steel in the plant workshop.



OXY-ACETYLENE FLAME of one of the eight electric burning machines is cutting a piece of steel to conform with the template pattern.



AWAY from roar of the shipyard, Assistant General Manager George Cleet (left), Tom Fisher, naval architect, and General Manager J. F. Vaughn discuss plans for a new project in Mr. Vaughn's office.

Here, parts of anything from a barge to the biggest Seaway carrier can be laid out full-size on the floor. Ten experts in the shipbuilding craft's most highly specialized skill make light wooden templates with pinpoint accuracy. On the lower floor, these patterns are transformed into steel plates, angles and channels.

The framework, in lengths up to 35 feet, is bent to specifications while it's still red-hot after leaving a special furnace. Spikes, driven into holes in the bending slab, form the pattern and hold the steel until it cools in the desired shape.

Electrical Equipment

Plates to cover this skeleton are formed by one of Canada's largest rolling mills—the upper roller alone weighs 150 tons—which can handle steel sheeting up to two inches thick and 30 feet long. Holes for rivets are bored in the plates by four punching machines and two heavy drillers, all electrically driven. The shop's eight automatic electric burning machines run along tracks, cutting the steel with an oxy-acetylene flame.

A battery of 17 other electric ma-

chines in the carpentry and machine shops handle any ship repair or building problem, as well as producing many furnishings for a vessel.

Two 10-ton overhead gantry cranes lug the heavy sections from the stockpiles to the shops, and back out again when they're trimmed and bent, ready for transfer to the ship at the docks.

The heaviest equipment to be lowered into the vessel is handled by a sheer-leg crane towering 110 feet over the docks. This gargantuan, capable of lifting 125 tons, is operated by an underground electric motor. Lighter jobs are performed by another gantry and two mobile cranes.

When repairs or hull construction are complete, electricity plays a part in getting the landlocked ships afloat.

Floating With Power

The graving and building docks, at right angles to the Welland Canal, use its water to float vessels off the dry wooden blocks and out to the canal. A gravity-flow system permits the docks to be flooded to a draft of 30 feet in 90 seconds. Like

the 80-foot-wide gates to the canal, the dock valves are electrically controlled from two buildings, which also house the switches for the entire plant and yard.

If the ship is ready to sail, it has to get up steam while it's still high and dry, because the docks fill so quickly. If under construction, it is moved to the company's 1,200-foot fitting-out berth on the canal for the finishing touches, leaving the building dock available for other work.

Electricity also powers capstans equipped with 75-horsepower motors, which position ships in the docks, and compressors, which operate all the dry dock's pneumatic tools.

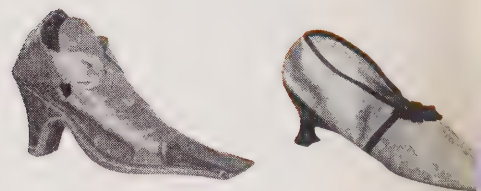
"Couldn't get along without it," George Cleet shouted. "Before we took Hydro service, I'd have to tell the men to stop rolling steel so I could operate the gates and valves.

"It will probably be a year before shipbuilders decide the best economic sizes and tonnages for ships on the Seaway and other factors like the extent of foreign competition. But we certainly feel it will mean more business.

"Now we're ready for it." ■

*Hydro men's safety shoes may not
be as elegant as the footwear of the
Middle Ages, but they're on guard
against accidents every working day*

PEDAL



LIKE CARS AROUND A NORTH AMERICAN HOME, THESE WOODEN CLOGS OUTSIDE A DUTCH RESIDENCE INDICATE "COMPANY."



BY DON WRIGHT

PROTECTION



IN stressing the importance of their products, tire manufacturers like to point out how a few inches of rubber provides the only contact between an automobile and solid ground.

Shoes play the same vital role for the pedestrian. And the evolution from sandal and moccasin to pump and brogue has reflected man's (and woman's) tastes and requirements in footwear since prehistoric times.

While climatic conditions permitted the early Egyptians and Greeks to go barefoot, they turned to sandals for protection against dust and heat about 5,000 years ago. These were rude affairs consisting of a sole attached to the foot with some sort of binding and without any attempt at ornamentation.

In the earliest days of civilization, the more primitive races in the colder regions shaped a crude shoe out of a single piece of untanned hide. This was laced with a thong to provide a complete foot covering. Eventually these two concepts were combined, and from the sole with-

out an upper, and an upper without a sole, emerged the complete shoe or boot.

Since that time, fashion has vied with functionalism in the evolution of footwear. In ancient times, shoes were made from papyrus stalks, plaited palm leaves, straw, wood and leather. These were dyed, embroidered, and even adorned with precious gems according to the social status of their owners.

Changes in styles have not been universal, however. For some people, their earliest creations have remained adequate. The moccasins worn by the Canadian Eskimo are largely the same as they have been for generations, and fibre sandals are still a popular fashion in the East. The Hittite people of Asia Minor still wear boots with up-turned toes like their ancestors hundreds of years before the birth of Christ.

Heels were a much later refinement, and some authorities maintain that right and left lasts were not introduced in England until late in the 18th Century. Shoe styles prob-

ably reached the height of absurdity soon after the Middle Ages and critics of the needle-point shoes worn by the modern miss can be thankful they were not born three or four hundred years ago.

With today's mass production methods, shoe styles must at least be reasonable enough to appeal to a mass market. In bygone days, however, shoemaking was largely a custom business, and fashion reflected the ingenuity and eccentricities of the individual. Once initiated, often followed, seemed to be the rule. At one stage, courtiers often wore long, tight boots with toes so long that they curled up and were attached to the knee. A different color for each leg added to the bizarre effect.

Tight Fit

In vying with each other for the wrinkle-free look, dandies of a later era ordered boots so tight that they could only be donned, with the assistance of a servant, after the foot had been dipped in water. High

(Continued on page 20)



THESE CRUDE LEATHER SHOES on display at the Royal Ontario Museum were popular in England during the 15th and 16th Centuries. Neither heels nor right and left lasts had made their appearance, but the uppers and lowers were made separately with some decoration.



A TORONTO GENTLEMAN wore these boots to his wedding more than a century ago. This type of boot was in style for many years.

boots with cuffs wide enough to encircle the waist also had their innings. Worn during a rainstorm, this model was likely to collect enough water for the monthly bath.

Intemperance also brought ridicule to the wooden-soled overshoes known as chopines. These were sensibly designed for protection in wet weather, but women who wished to appear taller wore them with soles more than a foot high. This practice prompted the remark in Hamlet . . . "your ladyship is nearer to heaven than when I saw you last, by the altitude of a chopine."

Wood as well as leather has withstood the test of time as a material for the cobbler's art. Clogs hewn from solid blocks are still used in parts of Holland and France where, presumably, durability and protection are esteemed above lightness and flexibility. The familiar word, sabotage, is said to be derived from the French sabot, meaning shoe. It seems that French workers made use of their heavy wooden shoes to disable mine and factory equipment during the labor upheavals of the 19th Century.

Footwear as a symbol of the theatre had its origin with the early Greek and Roman actors. A slipper-like shoe called the soccus, from which we derived the English word, sock, was worn by comedians, while tragedians wore the cothurnus, a heavy-soled buskin. The term "sock and buskin" now signifies comedy and tragedy.

Remote as the history of shoes may be from the day-to-day operation of an electrical utility, Hydro does take a vital interest in the development of footwear. Protection and comfort take precedence over appearance where Ontario Hydro is concerned, but fashion is not ignored.

Just as accidents have been averted by the use of hard hats and linemen's gloves, so have safety shoes helped to prevent countless disabling foot injuries. Unlike the hats and gloves, however, shoes are not stock items. Their use is promoted by Commission subsidies, and by the activities of the Safe Practices Section of the Construction Division.

A special committee has been

established to deal with the various aspects of safety equipment, and these men keep in close touch with new developments through the manufacturers. Only after careful study, often including an actual testing period, will they recommend a particular type of safety shoe or boot.

Promotion in the field is carried out by three safety officers, who travel the entire province, and by the resident safety officers at the major construction projects. Posters and price lists acquaint personnel with the latest types of approved safety footwear available, and arrangements are made to have mobile safety shoe stores visit Hydro projects and other centres. Purchase is facilitated by payroll deduction, while the Commission offers an additional incentive in the form of a \$3 subsidy on the price of each pair of safety shoes.

When they first became available, safety shoes were clumsy, uncomfortable affairs, which restricted movement and had a grotesque appearance. Today, basic safety fea-

tures are limited to a light, insulated, tempered-steel toe cap and a metal shank. These elements have been incorporated into every conceivable type of shoe and boot without affecting their style or performance. They are available, as well, in summer shoes with mesh vamps, while the ladies can get them in saddle shoes and loafers.

New Method

Progress in the design of safety shoes has paralleled the development of work shoes in general. They are available with composition soles that are reputed to outlast leather. Furthermore, discovery of a new process for vulcanizing rubber soles to leather uppers has re-vitalized this kind of work boot. One of the most

popular type worn by Hydro personnel is the insulated arctic boot designed for sub-zero weather.

The only kind of footwear regularly stocked in the Commission stores is the common garden variety of knee-length rubber boot, but even these incorporate the safety toe, and must conform to rigid standards of quality. Special metal foot guards are worn over regular shoes for certain work requiring little mobility and maximum protection. This includes such tasks as breaking up scrap metal or operating compacting hammers.

Another unique type of footwear is worn by persons engaged in clearing trees and underbrush from the headpond areas of new power projects. Known as "slashers," these

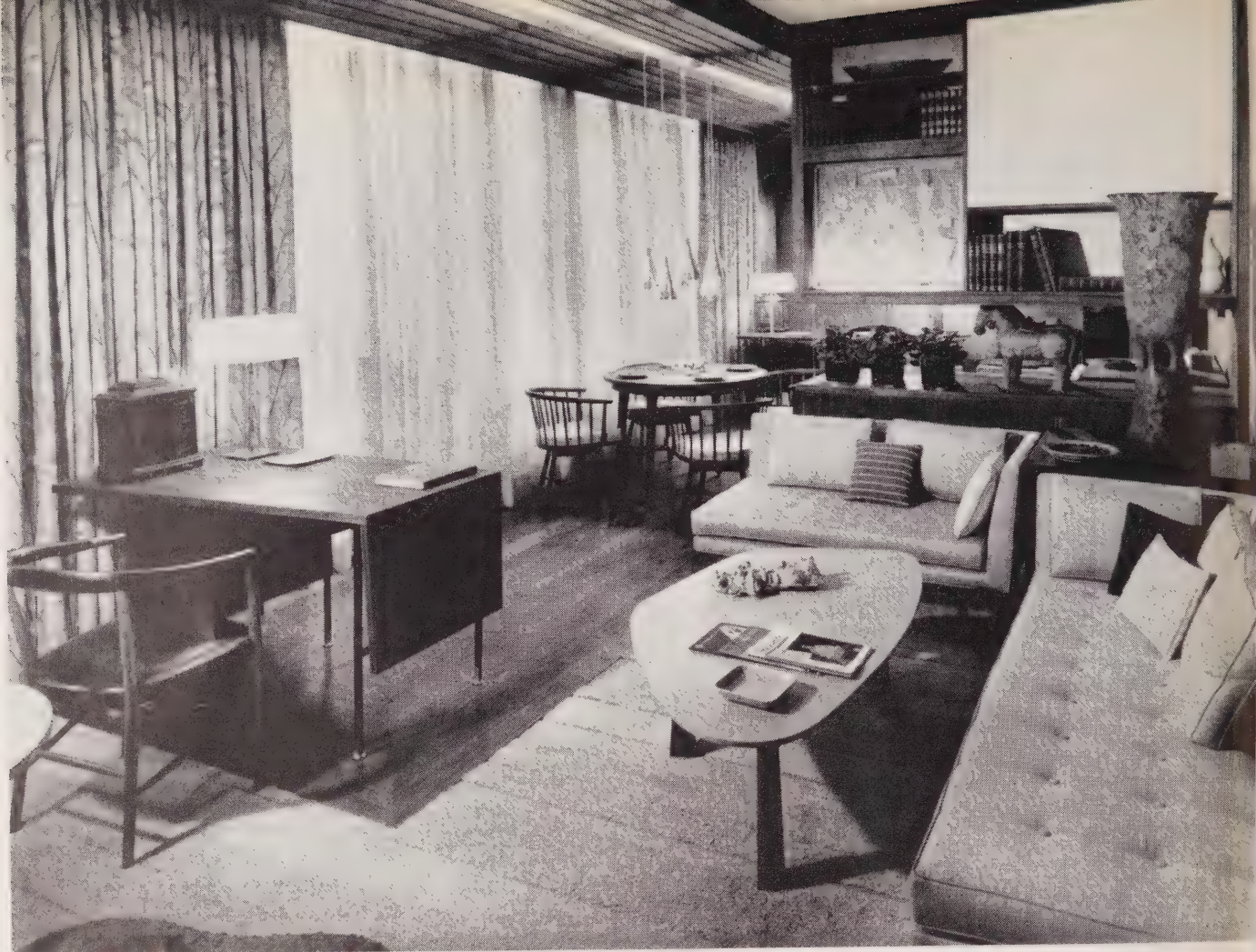
men require an extended area of protection. This is provided by wire mesh inserts in the upper part of the safety boot. These guards are strong enough to deflect the blade of an axe or a chain saw.

It is impossible to estimate the exact number of injuries avoided by the use of safety shoes. But one Hydro man keeps a safety shoe with the imprint of a tire stamped indelibly on the vamp. Another has a boot with a leather-bare toe. The first was caught napping when a two-ton truck pulled away, and the second missed his aim with a razor-sharp axe. Neither lost time as the result of these mishaps. There are many others, too, who will vouch for the effectiveness of safety shoes in their daily jobs. ■



RE-ENACTING how a 1 1/4-inch steel reinforcing rod struck his foot, this St. Lawrence Power Project worker was still able to smile — thanks to his safety shoes. His foot was only slightly bruised. The condition of his shoe after the accident (below) shows how it bore the brunt of the impact.





MAKING LIGHT WORK

LIGHTING affects the apparent shape and color of everything in a home, plays a major role in determining the occupants' mood, comfort, appearance. But is the lighting in most homes equal to the task? Does it work *for* a family, and not just *on* them? To find out whether and where—a home can be put in a better light, experts suggest the home-owner ask himself these four key questions:

1. Is there enough light where it's needed most? A single ceiling fixture that throws shadows in work areas is inadequate.

For peak efficiency, a light source should be located directly above each of the kitchen's main work areas. Work-benches, ironing boards and such also need direct overhead illumination.

Each desk and reading chair should have a nearby source of light. When a person is reading, writing, sewing or doing other close work, the light should come from the side *opposite* the working hand — to prevent those distracting shadows sometimes cast by hand or arm. Avoid glare simply by shading all bulbs or fluorescent strips, and by

arranging lamps so that harsh light isn't reflected from the book, table or other surface at which the person is looking.

2. Is each room *evenly* lit? A room in which some areas are bright, others relatively dark, is conducive to eye-strain and edginess; uneven lighting also casts unflattering facial shadows. (Are you listening, ladies?) By using lamps or fixtures that send light upward as well as down, a softer, more uniform light can be achieved.

3. How much control over the level of brightness in a room? Sure,

SEVERAL METHODS of decorative lighting are used in this living-dining room. Curtains are illuminated from a cornice above. The ceiling on the left side of the room is a single panel of light with the rays directed downward by wooden baffles. The sand sculpture is lighted from below to create shadows and a feeling of depth. Dropped spotlights over the table and general lighting from the urn-shaped luminaire on the right provide additional illumination. All lights may be brightened or dimmed by special controls.

it's possible to turn off some lights when the family wants to watch TV or dine candlelight style—but undesirable contrast and shadows are created in the process. Three-way lamps are a partial solution, but they're impractical in many rooms.

More and more decorators and homeowners are solving the problem with a light control that fits right into the wall. By turning a dial, illumination at the desired level is produced: efficient brightness for kitchen work, softer lights for serving. A dim night light in the bathroom eliminates groping in the dark, and can be turned up instantly to full brightness for early morning ablutions. Taking a leaf from the restaurateur's notebook, one can even encourage guests to leave or linger by flipping the light control. The control is a transformer and not a dangerous heat-creating rheostat. It releases only the current needed to provide the amount of light desired.

4. Does lighting enhance the beauty of home furnishings? Experiments have shown that the first thing people notice on entering a room is the source of light. Next their eyes seek out the furnishings and fixings on which most of the light falls. By moving some lamps around or installing a couple of wall fixtures, it's possible to spotlight a prized painting . . . a handsome plant grouping . . . a piece of furniture. Walls washed with light seem larger, and upward-focused light raises the apparent height of a ceiling. Illuminating drapes gives a cheerful daylight effect.

How best to highlight a home? Fluorescent strips in the form of coves (wall fixtures that reflect light

upward to ceiling), cornices (direct light downward to wash walls and surfaces with light) and valances (reflect light both up and down) produce a broad, flat light that's fine for illuminating large areas. But the warmer light of an incandescent bulb is better to spark smaller spots in the room.

Wonderful for warm, vibrant colors, incandescents have a slight tendency to darken blues and greens. But if a fluorescent strip lighting is used, it's important to get the right color. Several different shades of white are sold, and using "cool

white" with a warm color scheme, or "warm white" in a cool-toned room produces a grayed effect.

Any difference in price? Fluorescent strips are somewhat more expensive to install, but give about 2½ times as much light as incandescent bulbs of the same wattage.

Using light as a decorative accessory, adjusting it to varying visual needs while providing even illumination and ample working light at all times, can give a home that indispensable "light touch" that will make it a safer, more pleasant place in which to live. ■

HOW TO RECOGNIZE 13 BASIC TABLE LAMPS

DESPITE all the innovations in lamp design, some contours have become classics. Changes in proportions, materials, surface treatments, and decorations may vary, but these basic table-lamp shapes retain their essential and easily recognizable characteristics.

Some are derived from architectural forms, such as the column and baluster, while the candlestick and the oil-lamp fount — earlier lighting devices — inspired others. Decorative containers and geometric forms are also inspirations for contemporary designs.

1. Column Classic motif conveys a feeling of dignity appropriate for English 18th-Century, Regency, and Directoire furnishings. Simple versions also harmonize well with Contemporary.

2. Jar Most styles have a charming informality good for Early-American and Provincial settings. Others may be Oriental.

(Continued on page 24)



BASIC TABLE LAMPS



3. URN



4. CYLINDER



5. VASE



6. CANDELABRA



7. FIGURE



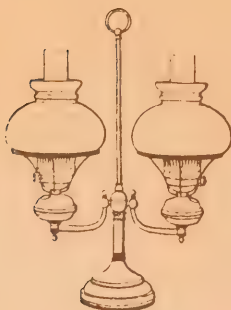
8. BALUSTER



9. GLOBE



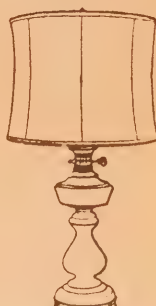
10. CANDLESTICK



11. TWIN



12. BOTTLE



13. OIL

3. Urn Another classic, its rounded form contrasts effectively with the column lamp when used in the same room. This one is an 18th-Century interpretation in China.

4. Cylinder Simplest of all lamp shapes, it lends itself to varied materials, patterns and textures. Style shown is wallpaper roller.

5. Vase Far Eastern design presents fluid curves, perfectly balanced proportions. Example is reproduction of a Chinese vase. Others may be of classical origin.

6. Candelabra Ornamental branches bring a note of elegance to formal traditional interiors, such as Regency and Empire. Four-arm style, with intricate scrollwork, is shown. It holds four light bulbs.

7. Figure Sculpture ranging from classic busts to French court figures is incorporated into lamps. The subject determines the period.

8. Baluster Borrowed from architecture, the molded support, with its rhythmic curves, is readily adaptable to both traditional and contemporary rooms. This is seen most often in wood or plaster.

9. Globe In Victorian days, the glass bowl and chimney shielded an open flame. Now purely decorative, the motif is retained in simplified styles. Frequently hand painted.

10. Candlestick One of the oldest lighting devices, it carries out the spirit of Colonial decor.

11. Twin Also called "Student" because it gave better reading light than other sources—used from 1875 to 1900. Harmonizes with Colonial furniture, despite later origin. Also comes in single-globe versions.

12. Bottle Popular in elongated, slender contemporary designs.

13. Oil Fuel reservoir and key for turning up the wick are typical. Usually seen in china or glass. ■

FOTO-NEWS

LARGEST YET — The largest piece of equipment to have been brought in by ship to Toronto to date, this 63-ton outer casing for a stator at Ontario Hydro's Richard L. Hearn Generating Station (background) is shown above as it was being unloaded off the S.S. Grainmotor. The casing is 19½ feet in length, 16 feet 8 inches wide and 15½ feet high. It was unloaded by the Toronto Harbor Commission's 75-ton capacity crane, which can be seen on the barge.

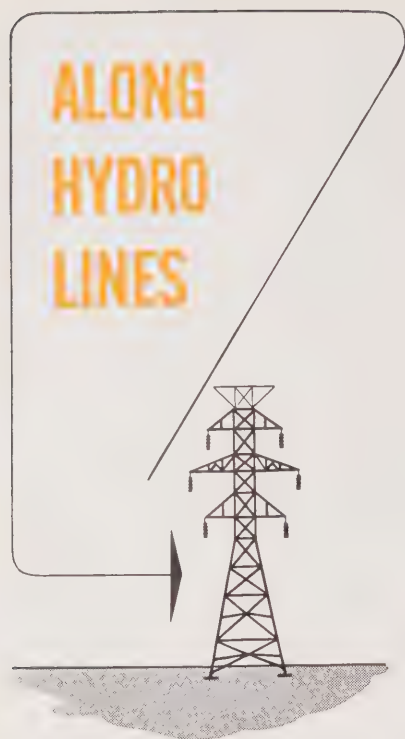


THREE GENERATIONS of the Desjardins family stand by as Susie Alcorn, North Bay, perched on the shoulders of her grandfather, Harry Desjardins, "turns on the power" at Chaudiere Lodge on the French River. Gene Desjardins, left, and Harry Desjardins, right, who is holding his son, Bruce, are both sons of resort owner, Harry Desjardins. Hydro service, administered by Warren R.O.A., has also been extended to many other lodges and summer cottages in the French River area of Northeastern Ontario.



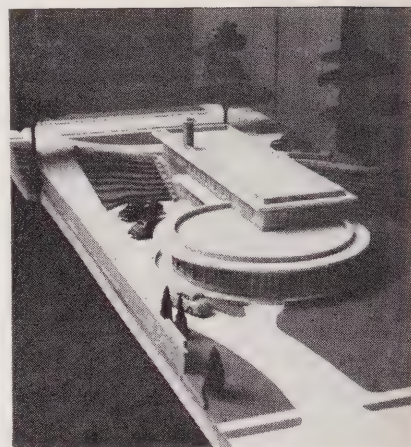
PRIZE - WINNERS in a public speaking contest sponsored by Ajax Hydro-Electric Commission, Robert Falby, centre, and Wayne McFarlane, left, accept cheques for first and second prizes respectively from Manager J. K. Sanders. All contestants at Ajax High School based their speeches on the "Live Better Electrically" theme.





STRATFORD STEPS OUT

MEMBERS and staff of Stratford Public Utility Commission are looking into the future to the day when they move into their modern headquarters building depicted here in scale model form. Situated on Highway 7 (Erie St.) near the centre of the Festival City, the ultra-modern, two-level building will provide approximately 10,000 square feet of floor space. Ample parking space and easy access to a main thoroughfare are just a few of the features designed to promote good customer relations. The circular, lower-level structure in the foreground will house the public and general office area. The upper level or second storey will accommodate the engineering offices, meter and appliance service departments. The new building will be adjacent to the recently completed service centre, which will



result in a compact and practical utility area with easy access to all departments. The \$225,000 utility headquarters will be air-conditioned, and will use electric hot water equipment for the heating system.

Northeastern Utilities Form O.M.E.A. District Group

Representatives of 10 municipalities met recently in Cochrane to organize a Northeastern District of the Ontario Municipal Electrical Association. Municipal electrical utilities in this area have been members of Georgian Bay M.E.A. in previous years.

Edward Dash, chairman of Sudbury H.E.C., was elected president of the new District. Other officers elected were G. J. Kydd, Cochrane P.U.C. chairman; Mayor Harold Prescott, chairman, Capreol H.E.C., and E. J. Holden, chairman of Kapuskasing P.U.C. Bruce McCubbin, North Bay, was named secretary.

Bert Merson, president of the parent O.M.E.A., was among those who attended the inaugural meeting. It was decided that another meeting would be held in October, although the new organization will not be officially constituted until the 1960 annual O.M.E.A. meeting.

Colleagues Honor Retiring Accountant

Well known throughout the Collingwood district and to a wide circle of Hydro colleagues, Miss Muriel E. Douglas retired recently after 38 years' valued service as accountant with Collingwood P.U.C.

At a staff dinner in her honor, Chairman Louis Dique; Joseph Bull, fellow worker for 17 years, and George Huston, Ontario Hydro auditor for the district, expressed their appreciation of her long period of service. During a period when the commission was without a manager, Miss Douglas held the position of secretary-treasurer.

Miss Margaret Bunting and Miss Isobel Beynon, co-workers, presented Miss Douglas with a corsage, camera and case on behalf of the commission and staff.

Woodbridge Hydro Executive Celebrates Wedding Anniversary

Mr. and Mrs. E. W. Brown celebrated their 60th wedding anniversary

recently. Mr. Brown has been Secretary-Treasurer of Woodbridge Hydro since its inception in 1914.

The couple marked the occasion by holding open house at their home in Woodbridge. They received telegrams and letters of congratulations from Queen Elizabeth, Prime Minister Diefenbaker, Prime Minister Leslie Frost and others. They were married at Thistletown, Ont.

Eastview Favors Licensing Electricians

All electrical contractors and electricians doing work in Eastview must now be licensed by that municipality.

A new by-law passed by the municipal council of the Eastern Ontario community requires that electricians, although licensed to operate in Hull, Ottawa and other nearby centres, must be examined and licensed by a locally-appointed examining board before performing any work there.

Ottawa Hydro Expands System

To meet the increasing electrical demands of a rapidly growing city, Ottawa Hydro spent \$2,028,000 on capital construction in 1958. More than half of the expenditure came from net income.

Presented at Ottawa Hydro's annual dinner meeting in the Chateau Laurier for municipal officials, the commission's report for the year 1958 showed total revenue of \$9,080,990, representing a \$762,933 increase over the previous year's figure.

The report pointed out that "the domestic use of power has doubled within the past 10 years." At present there are some 70 electrical appliances available for use in homes with "many more to be put on the market."

At the end of 1958, the number of customers being served in Ottawa, Eastview and Rockcliffe was 80,521—an increase of 4,168 or 5.46 per cent over 1957.

Windsor U.C. Names Personnel Manager

A newly-created post in the Windsor U.C. has been filled by Murray E. Reed, who was appointed personnel manager for the utility recently.

Mr. Reed, who was born and educated in Windsor, was with Ford of Canada prior to World War II, during which he served with the Canadian Army. Following a medical discharge in 1944, he was associated with the customs staff at Windsor until 1949, when he joined the purchasing department of Motor Products Ltd. Subsequently he was transferred to the personnel department and has been assistant personnel manager of the latter company since 1953.

In his new position, Mr. Reed will be responsible for handling and screening all employees, as well as handling all personnel problems. The post was created to lighten the duties of the general manager and secretary-treasurer.



ROBERT H. J. GRAY

Named Supervising Municipal Accountant

A. W. S. Smith, regional manager of Ontario Hydro's Toronto Region, has announced the appointment of Robert H. J. Gray, B.Comm., C.P.A., as supervising municipal accountant for the Toronto Region.

A graduate of the University of Toronto in Commerce and Finance in 1951 and a Certified Public Accountant, Mr. Gray joined Ontario Hydro in 1951. He has had considerable and varied accounting experience at Toronto and London and just recently at Ontario Hydro's Silver Falls Project in Northern Ontario.

Supervising municipal accountant is a new position recently created to strengthen the municipal accounting staff in the Toronto Region in order to cope with the unprecedented growth of the municipal electrical utilities in and adjacent to the Metropolitan Toronto area.

North Bay Initiates Water Heater Plan

North Bay Hydro-Electric Commission has announced approval of an electric water heater rental plan for its domestic customers. Discussing details of the plan recently, Manager B. M. Graham said that a standard, 40-Imperial gallon, stone-lined tank, equipped with elements suitable to meet the par-

MONARCH—SURVEYS

(Continued from page 3)

Operating on the microwave principle, the South African machine employs a master instrument and a "remote." Microwaves are sent out by the master unit and "bounced back" by the remote. It is estimated that the battery-operated Tellurometer can transmit these microwaves for distances up to 30 miles over unobstructed territory. Readings are taken by the operator from a circular scale placed on the observing face of the master set.

In its simplest terms, the new surveying instrument represents an extension of radar. Looking through the instrument's eye-piece, the viewer sees the small screen of the cathode tube upon which the reading is recorded. Similarly, its employment of microwaves relates it remotely to the network of relay stations scattered across Canada on high points of land which carry TV programs across the nation.

Airborne Operation

This 20th Century innovation is now in daily use—proving that it is monarch of all it surveys. Recent purchase of the Commission's new "Alouette" helicopter (Ontario Hydro News — June, 1959) has prompted studies of the feasibility of a combined Tellurometer-helicopter operation to accelerate surveys of difficult terrain.

Ontario's rising power demands mean more work for Ontario Hydro's Survey Department, which must lay the groundwork for engineering designs and actual construction. With this new ally, Commission surveyors are confident they can stay in the vanguard. ■

ticular requirements of each family, will be available to customers at a monthly rental of \$2.00, with the energy charge dependent on the size of the element installed. This rental plan has been adopted to assist customers who may not be in a position to spend \$100-\$200 for a new hot water tank.

CALENDAR OF EVENTS

SEVERAL organizations associated with the electrical utility field have announced dates for meetings and conferences during 1959. The following events will be of interest to readers of Ontario Hydro News:

Sept. 16	Grand Valley M.E.A., Galt;
Sept. 17	Eastern Ontario Metermen's Assoc., Almonte;
Sept. 22-23	Thunder Bay M.E.A., Sioux Lookout;
Sept. 25	Opening of Silver Falls G.S.;
Sept. 24-25	Western Accounting Meeting, Walper House, Kitchener;
Oct. 2	West Central Region, A.M.E.U., Dundas;
Oct. 7	Niagara Region, A.M.E.U.;
Oct. 7	Grand Valley Metermen's Assoc., Guelph;
Oct. 14	District No. 7 O.M.E.A., London;
Oct.	District No. 9 O.M.E.A., Cochrane;
Oct. 21	Western Ontario Electric Meter Assoc., Sarnia;
Oct. 21	Georgian Bay Region, A.M.E.U., Orangeville;
Nov. 18	District No. 4 O.M.E.A., Toronto;
Nov.	District No. 8 O.M.E.A., Ridgeway;
1960	
Feb. 29, March 1 & 2	O.M.E.A.-A.M.E.U. Annual Meeting, Toronto;
March 16-18	Niagara Region, Metering Meeting;
April 26	Executive Committee and Past President's Dinner, A.M.E.U., Toronto;
June 23-25	A.M.E.U. Summer Technical Conference, Queen's University, Kingston.

(Courtesy of the A.M.E.U.)

Maritimer Heads Engineers' Council

A 54-year-old consulting engineer who has served twice as president of the New Brunswick Association of Professional Engineers has been elected president of the 34,000-member Canadian Council of Professional Engineers at its annual meeting in Winnipeg.

Donald Orton Turnbull, P.Eng., a native of Rothesay, N.B., succeeds Prof. W. O. Richmond, P.Eng., of Vancouver, as president of the national advisory body for Canada's 11 provincial and territorial professional engineering organizations.

Women are like angels. They're always up in the air, have few clothes and are always harping about something.

Sarnia Hydro Names Promotion Representative

Encouraging householders, builders and electrical contractors to install more electrical equipment in new houses will be William Ketley's new job with Sarnia Hydro-Electric Commission.

Formerly an appliance service man in the Hydro Shop Service Department, Mr. Ketley was appointed to the newly-created position recently. In a bid for increased electrical appliance sales and better service installations, William Doyle, promotion manager of the Sarnia utility, and Mr. Ketley, will use films as part of their promotion work.

Sarnia Hydro Commissioners recently endorsed the "Live Better Electrically" campaign currently being conducted throughout the province.

SEAL OF QUALITY

(Continued from page 11)

plication of communication cables for system control; W. S. Preston, Ontario Hydro, directed attention to load study by reporting the progress of the A.M.E.U. committee handling this matter.

As a complete change of pace, Alex DeMaio, manager of the Commission's A. W. Manby Service Centre, west of Toronto, dealt with the use and maintenance of motor vehicles and other mechanical equipment and their importance in efficient utility operation.

After lunch, delegates turned their attention to the question of low-cost residential underground systems under the Chairmanship of William Mullin, Windsor U.C. Following an introductory paper by Gordon Piper, Ontario Hydro, a series of experience reports were presented by Bruce Annand, Oshawa; Keith Leeson, London; Bert Fleming, Toronto Township, and Ken Richards, St. Catharines.

At the concluding session, A. G. Stacey, Guelph, headed a discussion on metering, which was highlighted by a provocative paper presented by Elliott McBroom, Toronto Hydro. Another Toronto Hydro engineer, J. F. Thomlinson, attracted attention with his discussion of voltage limits on starting currents.

R. E. Treen, Ontario Hydro, briefly dealt with the joint use of poles and the drawing of agreements relating to the erection of signs on poles.

As a final feature, E. F. Burbank, Toronto Hydro, presented a progress report from the A.M.E.U. Overhead Distribution Committee.

— by the Editor.

FOREMAN DIES

Foreman with the Hydro department of Simcoe P.U.C. for 17 years, Wray White died recently after a lengthy illness. He was 56 years old. Mr. White, who lived in the district most of his life, was an employee of Ontario Hydro for 10 years before joining the Simcoe utility staff.



The Power of a Cent

At today's values one cent does not buy too much, but start thinking in terms of electric energy and you will be surprised how much a cent will do for you.

A cent's worth of electricity at the average domestic cost can save you hours of hard work.

For example, it will . . .

- Operate a floor polisher for 3 hours.
- Do two wash loads in an automatic washer.
- Operate a vacuum cleaner for 1½ hours.
- Operate a drill for 5 hours.



LIVE BETTER ELECTRICALLY
the safe, clean, modern way

(Sample advertisement—mats available to the associated municipal utilities for use in local "Live Better Electrically" campaigns.)





OCTOBER, 1959

ONTARIO HYDRO NEWS



OCTOBER, 1959

VOL. 46, No. 10



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Ontario Hydro's Head Office—bathed in the glow of 108 sodium and mercury vapor lamps—catches the eye of Toronto residents and visitors alike. For further details see "The Light Treatment" on page 2.

ONTARIO HYDRO NEWS

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COVER PHOTOGRAPHS

As we go to press this month, the Ontario countryside is on parade in its vivid fall costume — so as a salute, our front cover reproduces in detail some of the leaves which lend color to the province at this season.

On our back cover we show the "nerve centre" of Ontario Hydro's extra-high-voltage transmission line at Coldwater (described in the September issue of *Ontario Hydro News*.) The transformers are so designed and equipped that they can be operated continuously at voltages up to 500,000 to a maximum of 600,000 volts.

OCTOBER, 1959

NEW CANADIAN ENTERPRISE

It is a rewarding and interesting experience to study the contribution which new Canadians have made to this country's economy in the past few years.

Many of these new citizens have brought with them new cultures, new skills and invariably a fresh and vibrant appreciation of democratic principles, it is true. Moreover, many have brought substantial amounts of money, securities and other effects with them. But few native Canadians realize that they have, in the last nine years, inaugurated a total of 2,442 small business enterprises—either by purchase or rental.

Another encouraging aspect of the postwar wave of immigration has been its impact upon consumer spending. In the period between 1951 and 1958, some 1,365,000 persons of foreign birth emigrated to Canada—a preponderant majority settling in Ontario. Using the 1951 census as a basis, estimates indicate that new Canadians have established more than 248,000 households during these years.

Apart from their impressive record as producers, they have built up a notable reputation as consumers. To equip their new households, they bought nearly 173,000 cooking ranges; more than 105,000 refrigerators; 128,000 washing machines; 72,000 vacuum cleaners; in excess of 207,000 radios, in addition to their purchases of 81,000 automobiles and the installation of 120,000 telephones.

The foregoing information is of particular interest and importance to Ontario's electrical utilities, who are seeking new opportunities of focusing public attention on the countless advantages of electrical living.

A previous issue of this magazine suggested that every municipal utility employee—particularly those staff members with a knowledge of other languages—can play a significant role in a utility sales promotion program by contacting those who have come from foreign countries in recent years.

It is important, of course, that any utility employee entrusted with such an important responsibility—either on a full scale or part-time basis—be given special training in electrical sales techniques and procedures. In this connection, Ontario Hydro's sales superintendents in each of the Commission's nine regions, backed by a sales training staff at Head Office, stand ready to provide the utmost assistance to utility representatives in the various phases of this program, which can bring only ultimate benefit to all concerned.

THE LIGHT TREATMENT



by Robert McDonell

ILLUMINATING engineers and technicians are creating new magic in many of Ontario's urban areas these nights.

Floodlighting is taking the gloom out of night and accenting the architecture of churches, public buildings, office structures and hundreds of modern industrial plants.

As a gauge of the growing interest in this quiet, dignified type of advertising, manufacturers, distributors and public utilities report that inquiries about floodlighting installations have increased by some 200 per cent in the past two years.

Two factors have contributed largely to the rapid expansion of floodlighting: First, the establishment of scores of new industrial plants in suburban districts — many on well-travelled highways—where their structural lines and their location combine to create a proper atmosphere for this type of promotion; secondly, the development of improved lighting equipment has also influenced the trend. Sodium and mercury vapor lamps have increased the illuminating efficiency, meanwhile lending themselves to light distribution in pleasing and effective proportions.

The sodium vapor lamp was first used for outdoor illumination at the Automotive Building of Toronto's Canadian National Exhibition in 1937, but its general acceptance for

this purpose did not develop until recent years.

Perhaps the most spectacular example of structural floodlighting in Canada can be found in the nation's capital, Ottawa, where various types of lights have been used to impart a warm golden cast to the granite of the buildings on Parliament Hill. Inaugurated for the 1957 visit of Her Majesty, Queen Elizabeth II, the lighting proved so effective that it has been extended to most of the Canadian Government buildings.

A new floodlighting installation was completed at the Ontario Legislature building at Toronto's Queens Park in time for the Royal Visit earlier this year.

Commercial and business firms in the downtown areas of many larger cities have found it profitable to highlight the upper storeys of their buildings. One of the first installations in Toronto was the 34-storey Canadian Bank of Commerce building. Here 164 sodium vapor lamps bathe the upper section of the impressive structure in a golden glow visible for miles. Illuminated by a battery of twenty, 100-watt mercury vapor and eighty-eight, 140-watt sodium vapor lamps, Ontario Hydro's Head Office building on University Avenue now stands out prominently against the night sky. Numerous other city buildings in the "tall"

(Continued on page 4)

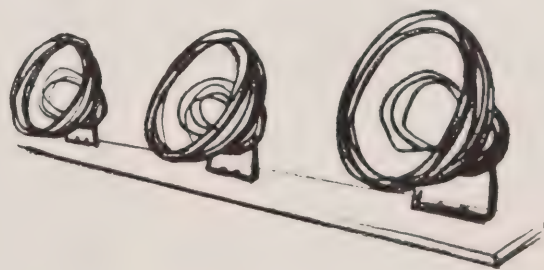




POMP AND SPLENDOR of Queen Elizabeth's visit to Ottawa in 1957 prompted the original floodlighting of Parliament Hill. The reaction was so favorable that the lighting was extended to most public buildings in Canada's capital city.



NOT TO BE OUTDONE by its customers, York Township Hydro spotlights the modern architecture of its offices.





SODIUM VAPOR LAMPS are used in floodlighting the 34-storey head office of the Canadian Bank of Commerce in Toronto.



ORNATE MAIN ENTRANCE of Toronto's Royal Ontario Museum receives favorable comment on its effective floodlighting installations.

category have been given the light treatment.

Then, too, churches and college campuses are installing lighting equipment to accentuate the architecture of their edifices.

No story of floodlighting in Ontario would be complete without mention of Niagara Falls where the Niagara Falls Illumination Board, in co-operation with Ontario Hydro, presents one of the most outstanding floodlighting displays in the world. Here 20 carbon arc searchlights each play 210,000,000 candlepower on the Falls every evening. By means of automatic changing devices, it is possible to create a galaxy of dramatic color effects.

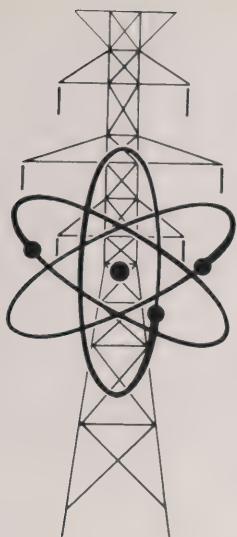
Pleasing to the visitor and resident alike, floodlighting has other important benefits, notably increased visibility for aircraft in downtown, skyscraper areas, as well as improved security at suburban plants.

It's pleasing, as well, to municipal electrical utilities, which are finding floodlighting a valuable, supplementary means of building off-peak loads.

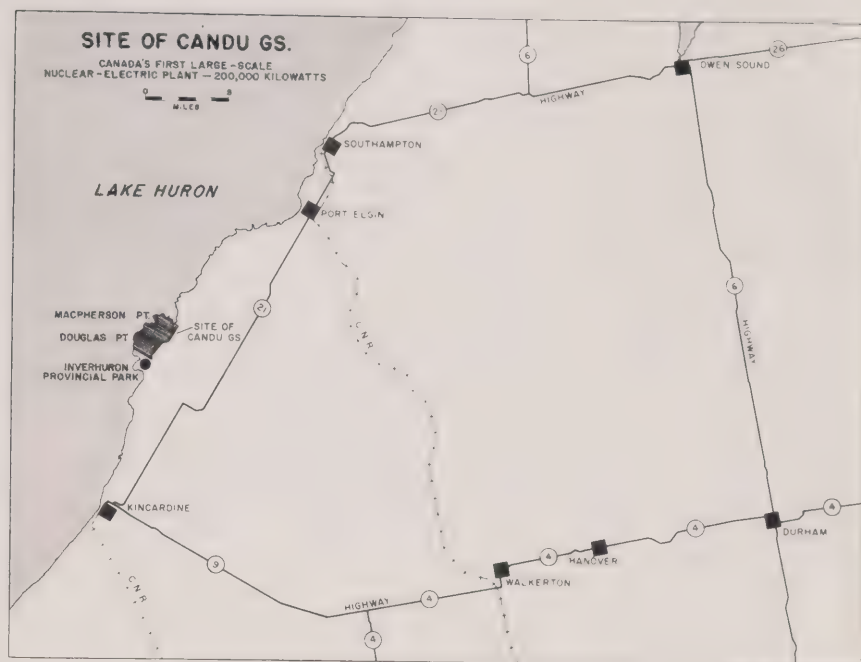


CANADA'S most spectacular floodlighting display at Niagara Falls is provided by 20 projectors (with a beam capacity of 4.2 billion candlepower) equipped with color-changing devices.

ONTARIO HYDRO NEWS



ANNOUNCE CANDU SITE



A 2,300-acre property on the shore of Lake Huron, lying almost midway between Kincardine and Port Elgin, has been selected as the site of Canada's first large-scale nuclear power station.

Consisting of about 19 lots, bounded on the south by Inverhuron Provincial Park, the site is a rocky promontory of bushland, jutting out into Lake Huron, and includes Douglas and MacPherson Points. Mainly cedar bush, the area is not used for farming, and habitation is limited to two summer cottages along the flat, rocky shoreline.

If approved by the Atomic Energy Control Board, the 200,000-kilowatt CANDU (Canadian Deuterium Uranium) nuclear-electric generating station will be built at this point. The \$60 million project will be built by Atomic Energy of Canada Limited. Although a small prototype nuclear station is now under construction by AECL, Ontario Hydro and Canadian General Electric Company Limited, CANDU will be Canada's first large-scale nuclear plant.

In July this year, Ontario Hydro announced that options had been taken on several properties in the area north of Kincardine. The Commission also investigated possible sites in the Blind River, Manitoulin Island, Owen Sound and Parry

Sound areas, as well as the Lake Huron shoreline between Goderich and Sarnia.

The location finally chosen possessed all the necessary characteristics for a nuclear-electric station. Test drilling to a depth of 110 feet proved foundation conditions satisfactory.

Shoreline conditions were also taken into consideration, as sand would clog the water intake of this type of station. Another factor favoring the Bruce County location was its proximity to Lake Huron and ample quantities of fresh water. The CANDU plant will use 300,000 gallons of water a minute for cooling purposes. Since the cooling water will not come in contact with radioactive materials, it will be returned to the lake in a pure condition.

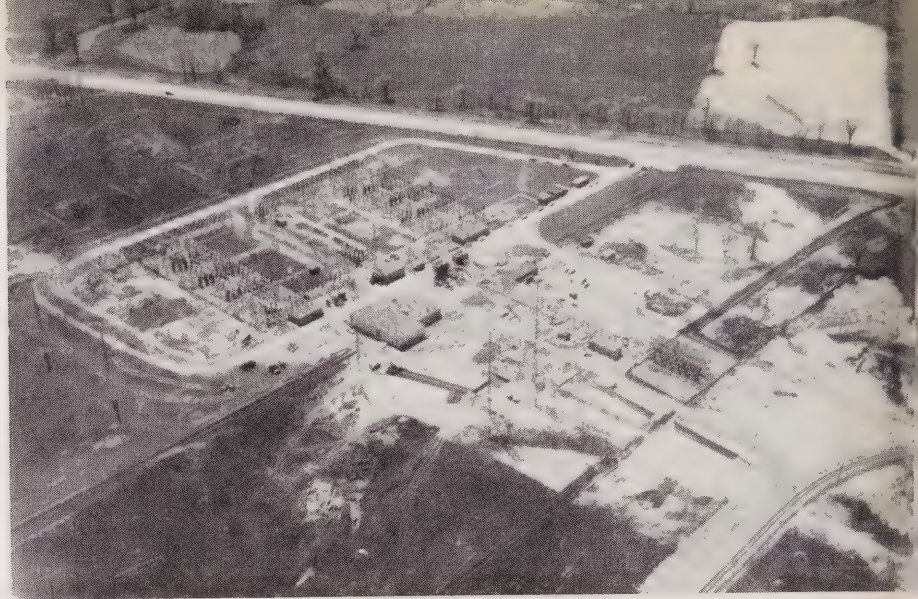
The fact that transmission facilities at Hanover are only 30 miles away was another important factor influencing selection of this site.

The Lake Huron site is close to Highway 21. Both Kincardine and Port Elgin are served by the Canadian National Railway, which will facilitate transportation during and after the construction period.

Design work is fully under way, but actual construction work on the CANDU project is not likely to begin before 1961. The project will probably employ a peak work force of 1,000 to 1,200 construction workers. The station is scheduled for service in late 1964 or early 1965.

Once in operation, the station will be staffed by Ontario Hydro, which will purchase the power generated at the price of equivalent replacement power from other sources. When it is apparent that the station can be suitably operated as part of the Hydro system, the Commission will buy the plant at a price, which will enable it to continue to produce power at a cost no higher than conventional power. ■

AERIAL VIEW of Richview Transformer Station on Highway 27. The System Control Centre is located in the one-storey building (centre foreground) close to the 230-kv switchyard.



MASTER STATION

There's an atmosphere of quiet efficiency at Hydro's New System Control Centre

A GLISTENING brick and aluminum building on Metropolitan Toronto's northwestern outskirts has become headquarters for several key members of Ontario Hydro's Operations Division staff.

Apart from the fact that it is located on the grounds of the Commission's Richview Transformer Station on busy Highway 27, there is little to distinguish it from scores of other nearby buildings.

Few, if any, of the hundreds of motorists who pass it daily, enroute to Malton air terminal or some other point, realize its vital function. They would, quite possibly, be amazed to learn that it houses Hydro's new System Control Centre where vigilant teams of experts maintain an even, constant flow of electricity to the homes, to the offices, factories and farms and to other types of customers in Southern Ontario and

part of Northeastern Ontario.

If they entered the control centre — a pastel-tinted, brilliantly-illuminated room on the main floor of the building — they might be momentarily bewildered by the battery of meters arranged in convenient positions on a gently curving panel at one end of the room. They'd be impressed, though, by the quiet assurance of three men sitting in that room. These men could soon set them straight on the name and purpose of each meter.

Five Teams

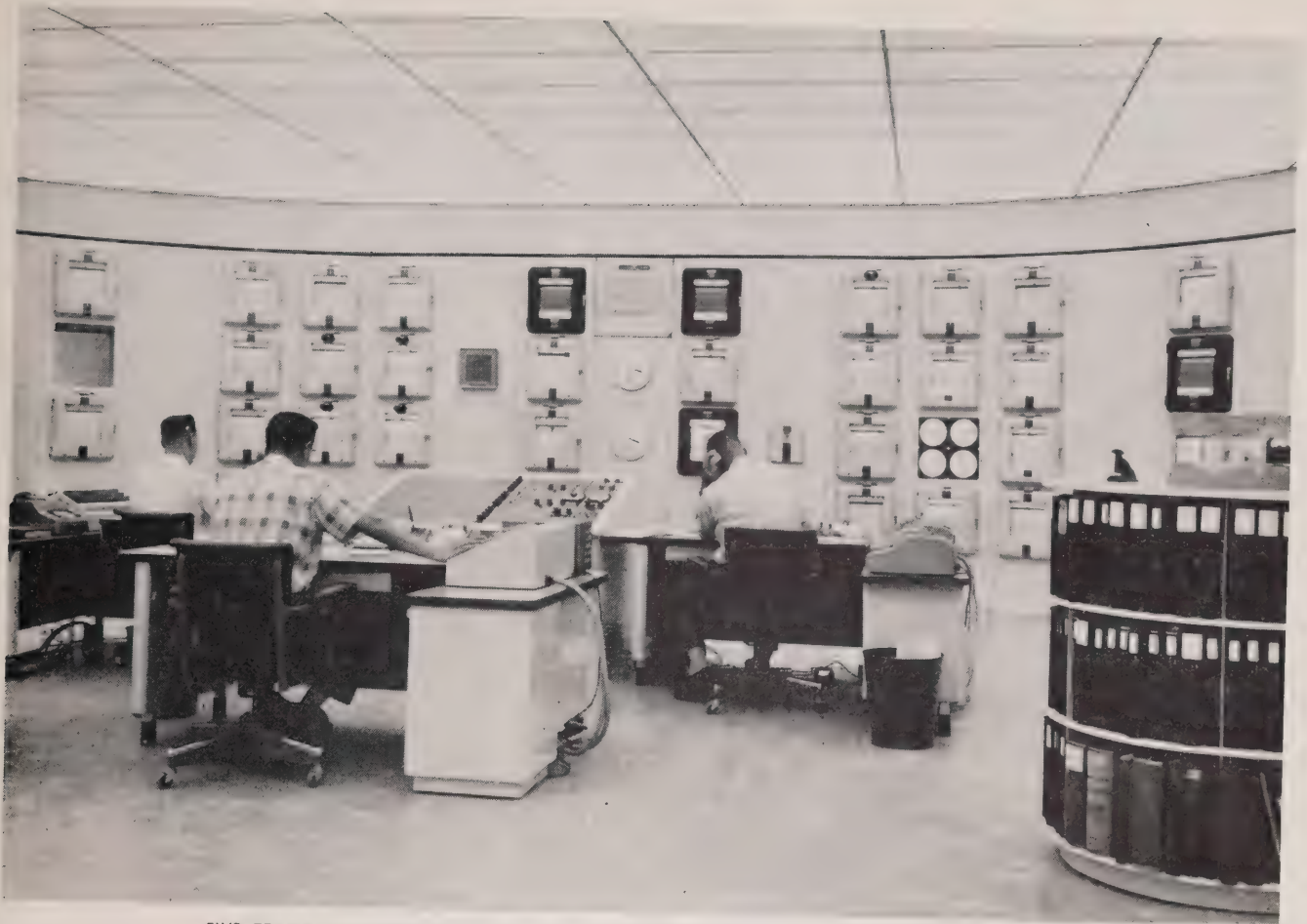
The visitor would find such a trio there at any time. Under the guidance of Supervising Engineer A. J. Harris, five teams of three men each operate the centre 24 hours a day. Each team consists of a system supervisor, who maintains the desired quality and security of service on the network; a production super-

visor, who ensures the most efficient and economical use of the Commission's Southern Ontario resources, and an assistant supervisor who helps both. The three sit at one end of the oval room facing the battery of meters.

The meters on their left indicate the loading on critical lines, the elevation of certain forebays and lake levels, and the output of several key hydro-electric stations.

A meter in the central area of the curved panel shows that the desired amount of electricity is being transmitted to other systems while generation is maintained at the correct level to meet system requirements. Other meters in this section indicate 25- and 60-cycle system primary demands and frequencies. There are also two clocks—one the master (which indicates "true" time), the

(Continued on page 20)



FIVE TEAMS OF THREE MEN EACH KEEP THE CONTROL CENTRE IN CONTINUOUS OPERATION.



WHILE Howard Coates, production supervisor, discusses a power exchange with an operator in an interconnected system, Wes. Lawler, assistant supervisor, checks on telemetered information.

OCTOBER, 1959



A. J. HARRIS, supervising engineer, is in charge of all phases of operations at Ontario Hydro's new System Control Centre.

This skin-diving bug:

Some skeptics say underwater swimmers have
"water on the brain," but Ontario Hydro
frogmen perform many indispensable tasks

AQUATIC ANTICS



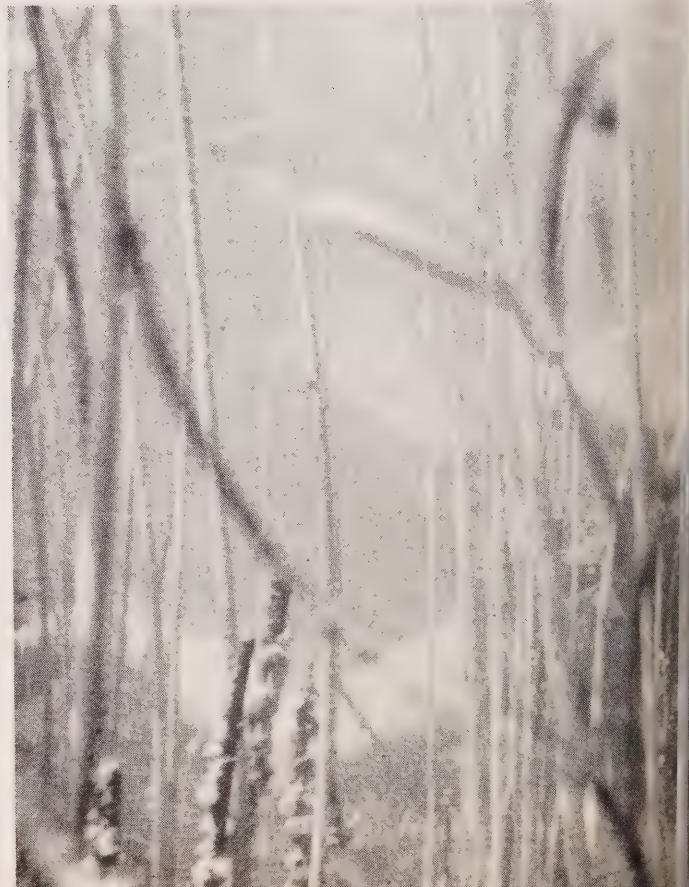
by Jim Foster

SOME scientists claim that mankind evolved from sea creatures, which flopped ashore millions of years ago and developed lungs. At any rate, a new breed, now rapidly multiplying around the world, seems determined to reverse the process.

These throwbacks may be known as skin divers, frogmen, snorkel swimmers or SCUBA divers, but they have one common characteristic: hydromania (craving for water), accompanied by a compulsion to imitate fish.

In the United States alone, five million have been counted and observed in such activities as underwater marriages, bridge games, shark-teasing contests, marathons to see how long they can sit on bottom, and other submarine shenanigans. Equipment sales, so far, indicate that three to four thousand Canadians have gone amphibious, and the Ontario Underwater Council, a co-ordinating body among local clubs, hopes to give the movement impetus with the formation of a Dominion council next year to promote safe diving.

"You won't find more devoted en-



thusiasts in any sport," says Ben Davis, president of the council. "Once you get started, you're hooked."

To learn why, *Ontario Hydro News* assigned a landlubber reporter to take the plunge with Niagara Region's Joe Lorimer, one of a dozen trained Hydro divers. He emerged from a water-filled quarry with his report:

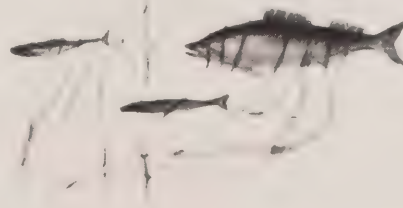
"First impression of SCUBA (Self-Contained Underwater Breathing Apparatus) — uncomfortable and unwieldy. Tried on a thin rubber suit, which is like trying to push a banana back into its skin through a pinhole. In the sun, felt like being inside a pressure cooker. Joe said I'd cool off underwater, but could do without suit if I wanted. Peeled it off, gasping with relief.

"Compressed air tank and harness felt clumsy as Joe fastened snaps which can be flicked off in an instant if necessary. Then came belt with lead weights, rubber fins for feet, and face mask which, in this equipment, was attached to regulator and tubes leading from the air

(Continued on page 10)



TURNING FROGMAN TEMPORARILY, Peter Hess, mechanical engineer at Ontario Hydro's Lakeview Generating Station project, west of Toronto, checks on rock placement for a breakwater.





GIVING HIS MASK a final check, Joe Lorimer, a trained Hydro diver at Niagara Falls, prepares to give a novice a lesson in underwater swimming.



THIS NOVICE found the diving suit cumbersome, so both Lorimer and pupil used ordinary bathing trunks and diving gear for the first lesson. Stressing safety first, Lorimer cautions the eager underwater beginner against resurfacing too rapidly.

tank. Waddled into shallow water like Donald Duck.

Underwater Impressions

"Instinctively held breath when I first went under. Tried inhaling cautiously, and suddenly found I could breathe almost as easily as on land. At the same time, realized the weight of equipment was gone, balanced by my buoyancy. Felt wonderful.

"Joe guided me down slowly in a trail of silver bubbles. I was puzzling over alternate cold and warm layers of water when pain shot through the bridge of my nose. Hardly seemed possible, but we were already 25 feet down. Remembering advice on pressure, exhaled violently, went up five feet, down again. Pain gone. Then, at 40 feet, sudden jab in ears. Snorted again, chewed vigorously, went up five feet, repeated performance, came down again. Pop. I had adjusted to the pressure of my new environment.

"Now a sense of freedom unlike swimming or ordinary diving. I was at home in an alien element, not fighting it for only a minute or two. All movements graceful and easy. No urge to move quickly — just lazed around, admiring rocks and weeds

in this strange green world. And always acutely aware of the lovely, rich, fresh air that means life.

"When air grew thin, turned valve to release reserve supply and get me up safely. Left my new world with great reluctance.

"P.S. My wife can't understand that we need a SCUBA outfit as much as a new electric range, so I'm thinking of renting gear from a sports store the odd week-end. Say, do you suppose I'm hooked?"

Anyone bitten by the bug should never try diving alone. Even veterans make sure help is nearby if required either from another diver or a qualified man on the surface. They know a slip can mean serious injury or death. For example, descending too quickly as pressure builds up half a pound per foot can result in "squeeze" that damages lungs, ears and sinuses. Coming up too quickly or holding your breath on the ascent can expand air in your lungs, causing lung ruptures and forcing air bubbles into the bloodstream. Improper decompression procedure can also liberate nitrogen bubbles in the blood and tissues — "the bends." And there are many other dangers, apart from

accidents. Anyone thinking of diving should consult his physician first.

Clubs Gain Members

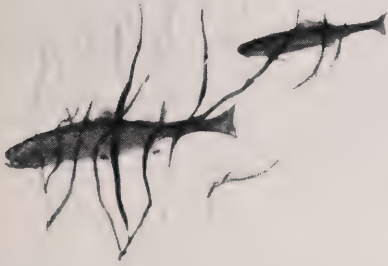
Many neophytes join groups such as Toronto's Underwater Club of Canada. Organized in 1952 with five members, it now has 200, only half of whom own SCUBA equipment. The others have fun with a face mask, fins and snorkel, an air tube that allows them to swim on the surface face down, but dive only on their own breath. (Incidentally, a record dive of 127 feet was achieved in Italy last year by a snorkeler. The SCUBA record is 385 feet.)

Such clubs in Ontario exchange visits, and go on weekend excursions, usually to spots where members might be able to prowling around sunken ships. Always the rule is safety first, then fun, whether they're practising in pools or exploring lakes.

Diving safety rules are rigidly enforced among Ontario Hydro tradesmen, who have been trained as part-time divers, either by top-notch commercial divers outside the Commission or by Hydro men who have proved their qualifications on pro-



FOR SHORT DIVES, a snorkel tube lets a diver stay down long enough to photograph the submarine world. The camera is carried in a watertight case.



AN EXPLOSIVES EXPERT hands a can of "Nitrone" to a skin diver, who loaded underwater holes in an upstream cofferdam at the St. Lawrence Power Project. Breaching of the cofferdam on July 1, 1958, created the forebay for the international development. (C.I.L. Photo)

jects, as well as in exacting tests of know-how and medical fitness.

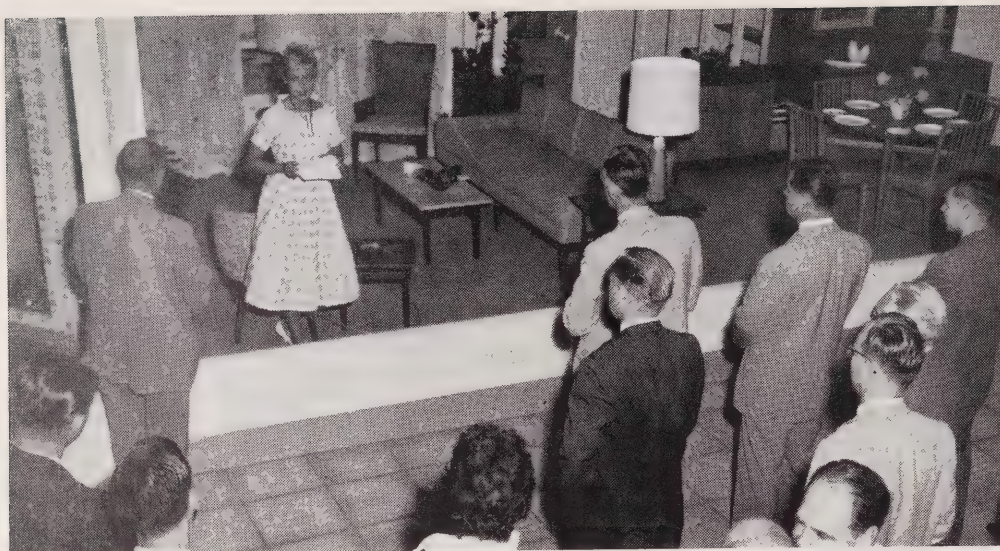
One of their most important jobs is finding debris that interferes with intake or discharge structures and directing cranes to the right spot for its removal. Frogmen were used, for example, to inspect the old power canal which carries water to the common forebay of the Sir Adam Beck-Niagara Generating Station Nos. 1 and 2 before a clean-up removed debris that had lowered the plant's capacity. They also played a vital role in removing sunken logs near stations on the Ottawa River.

Many Jobs

When generating units must be inspected in the dry, divers offer the most practical, satisfactory way to remove obstructions that would prevent the tailgates from being lowered completely. Hydro also calls on them for jobs such as cutting steel, sawing piles, salvaging sunken equipment, and inspecting and repairing structures.

Says Joe Lorimer: "I enjoy diving as much as when I started five years ago. I'm still learning every day, too, ever since the first lesson: if you lose your respect for deep water, you stand to lose your life." ■





△ GUESTS at a special preview of Hydro's all-electric home heard comely Sylvia Tyrell describe features of the living-dining area.

PATIO LIVING is gracious living, Jacqueline Bain tells these Ontario Hydro employees during one of the special tours arranged for members of the Commission staff.

VISITORS viewed the eight-room home from a tree-shaded court.



C. N. E.

1959 Edition





Hydro building converted to an all-electric dream home

THIS was International Year at Toronto's Canadian National Exhibition.

The vast throng of "Ex" patrons, numbering some two million this year, could find evidence of this predominant theme at many points. They could see it in countless attractive exhibits sponsored by scores of Canadian manufacturers and in the colorful booths of commercial firms from 19 different foreign nations.

The international atmosphere was heightened, too, by the sleek grey hulls of 23 warships from seven NATO countries riding at anchor in Lake Ontario off the C.N.E. grounds.

But there were many things that added lustre to the world's largest annual fall fair as it marked its 81st anniversary.

Entertainment ranged from the colorful grandstand extravaganza to daily band concerts. Education and commercial enterprise combined forces in the 2-1/4 million square feet of display space.

Model Home

Modern living was the keynote of the all-electric model home in the Hydro Building — one of the 54 permanent buildings in the 300-acre C.N.E. grounds.

Electric heating, lighting for better living, and a full complement of appliances, including closed circuit TV, made this home the answer to a housewife's dream. Here under one roof were concentrated all the presently available aids to modern electrical living — a veritable treasure-house of ideas for present and future homemakers.

During the C.N.E., talented high school seniors, drawn from secondary schools in the Metropolitan Toronto area, acted as hosts and hostesses for hundreds of daily visitors.

From the moment they stepped

through the entrance patio until they left, visitors had a sense of intimacy in the all-electric home. Hydro planners enhanced this "sense of natural association" by arranging the eight-room, full-scale home around a central tree-shaded court.

This home met the highest standards of excellence of the electrical industry, thereby qualifying as a Gold Medallion Home.

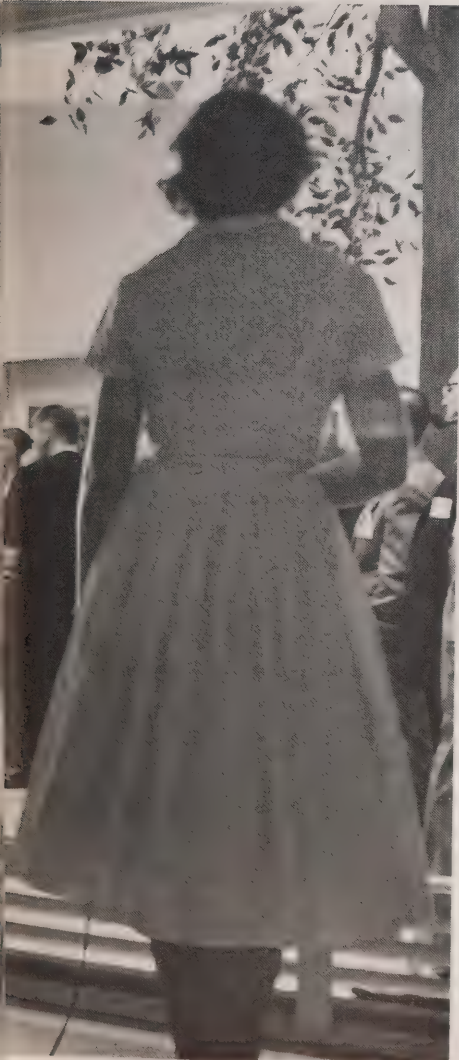
The patio area demonstrated a new concept of gracious family living. Here spectators found that they could take advantage of the leisure time made possible by the electric work savers in other parts of the house. A portable record player and TV set were available for entertainment, while father was testing his culinary prowess on an outside rotisserie, complete with electric spit, or mother prepared wieners at a moment's notice on a hot dog cooker. Visitors got many helpful hints also on installing effective outside lighting.

For the housewife, the kitchen-utility room area was planned for maximum comfort and convenience, with electricity as the household servant.

In the well-planned utility room, C. N. E. visitors found convincing proof that electricity has taken the last bit of drudgery out of laundry chores. Here they saw how it operates the almost magic automatic washers and dryers, while the water heater, safely hidden in a cupboard, furnishes ample supplies of hot water for any size of family. The advantages of other indispensable appliances, such as electric irons, vacuum cleaners and floor polishers were also shown in this area.

Turning to the other work centre of the home — the kitchen — the commentators demonstrated a whole

(Continued on page 14)



galaxy of glistening appliances and equipment: a combination deep-freeze refrigerator; fully-automatic dishwasher; fold-back surface cooking units and a built-in oven, as well as a full complement of small electrical aids to good cooking—mixer, blender, juicer, knife-sharpener and even an electric can-opener.

An Eye on the Nursery

Before too long, closed-circuit TV is expected to be relatively inexpensive, so this all-electric home included this innovation, which allows mother to keep on eye on baby in the nursery from either the utility room or kitchen.

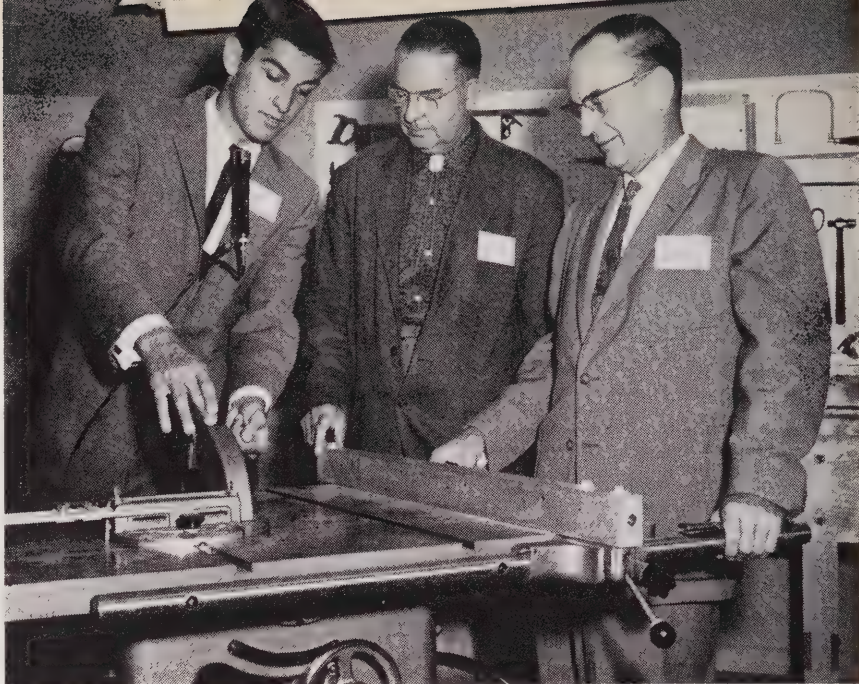
As Hydro's guests moved to the dining-living room area, they admired the dividers between the dining room and kitchen which accentuated the gleam of crystal and dinnerware; and they saw the advantage of keeping a toaster, food-warmer and other appliances here to save unnecessary steps to the kitchen with plenty of conveniently-located electrical outlets to connect these appliances.

In the living room, the accent was on 20th Century comfort with the help of clean, safe and quiet electric heating, while TV came in for its share of attention as a means of bringing the world into the home.

Ever hear of a floating ceiling? Well, it was pointed out as visitors inspected the bathroom, and saw how it could furnish glare-and-shadow-free light for good grooming. This room also suggested the use of a combination washer-dryer for small loads of lingerie, towels and wash-and-wear sheets.

Air conditioning equipment in the bedroom showed visitors its benefits in comfortable sleeping, regardless of outside temperatures or humidity conditions.

Male visitors evinced particular interest in the well-equipped hobby-shop complete with electric hand and bench tools. It was in this section, too, that visitors heard emphasis placed on the installation of sufficient circuits to provide ample "housepower" for present electrical



SAFE OPERATION of an electric saw in the hobby shop was demonstrated by John Volpe (left) with Amos Waites, Mimico, and A.M.E.U. President Ray Pfaff as an interested audience.



TWO OTHER prominent Hydro personalities, First Vice-Chairman W. Ross Strike and O.M.E.A. President Bert Merson, chairman, Toronto Hydro, stopped to discuss this kabob attachment for an electric rotisserie with Joy Davies, a well-known fashion consultant. Miss Davies helped to coach the 14 Toronto student demonstrators who were on duty in the electric home.

SCORES of visitors passed adm comments on Toronto Hydro's spar demonstration kitchen. Here Connie Kin home economist, describes the elec range and other major applie during the special pre of the Hydro buil

needs and those exciting new electrical applications which will soon be available.

The educational aspects of electric home heating featured in Hydro's all-electric home were emphasized in the display section of the Hydro Building's central rotunda. In keeping with the promotional interest in home heating, the display emphasized the need of proper insulation for best results.

Various methods of wall construction, with the proper type of insulation for each, were illustrated in the 30-foot display as were other advantages — low initial costs, cleanliness, and convenience. Technicians representing the different sections of the electrical industry were on hand to answer all questions.

Hot Water Display

Animation was the keynote in the Commission's hot water display. In a controlled sequence, colored water — green for cold, red for hot — showed the internal operations of an electric water heater during the

various stages of supplying a home's maximum requirements of hot water.

A master control panel was arranged so that the visitors might select a sequence appropriate to his particular family. He pushed buttons according to the number of persons in the family, the number of appliances which utilized hot water and the frequency of their use.

The computer then automatically indicated the proper type and size of heater required to provide an adequate supply of hot water to his home. The answer appeared on one of the five heaters which formed part of the display. Each heater represented one of the models now being supplied by Ontario Hydro and many associated utilities on a low-cost rental basis.

Electronic Range

As in previous years, Toronto Hydro co-operated in making the Hydro Building one of the major attractions of the C. N. E. Emphasis

this year was placed on an "Electronic Homemaking Demonstration," featuring an electronic range and other major electrical appliances.

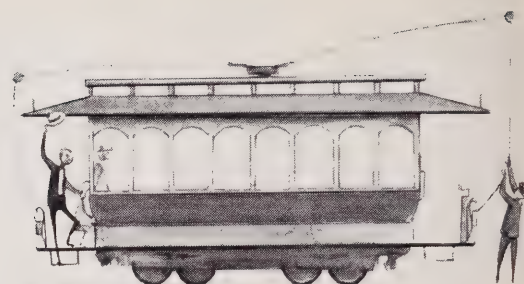
Miss Connie Kinnear, Toronto Hydro's home economist, was in charge of these demonstrations. And she evoked some excited gasps of wonder by "whipping up" appetizing chocolate cakes in the electronic range—in 3½ minutes flat! That wasn't all either. She used an electric saucepan, too, in preparing several hundred batches of deep-fried doughnuts that brought "delicious" comments from the spectator-tasters.

Supplementing the sparkling display of electrical equipment in the all-electric home, Toronto Hydro also had a much-admired exhibit of the latest in electric ranges and refrigerators, as well as portable home heaters.

As one visitor remarked "Electricity has come a long way since they first demonstrated electric lights at the C.N.E. of 1881." ■



CAPITAL FLASHBACK



POWER PIONEER

John York's name stands out in Ottawa's electrical history

PARLIAMENT, pine and power are all interwoven in the colorful cloth of Ottawa's past.

Not the least of these is the story of electricity. But anyone attempting to unravel the tangled skein of incorporations, purchases and amalgamations from which the Ottawa Hydro-Electric Commission finally emerged as the city's sole power distributor would do well to consult a genealogist.

Failing this, he might have a chat with John G. York. Now in his 91st year, this Hydro veteran has witnessed the Capital's changing electrical scene from the beginning. He still retains a lively interest through his son, Fred, who is the present Manager of Ottawa Hydro.

John York commenced his electrical career with the Standard Electric Company in 1891 — the same year that death ended the long political career of Prime Minister Sir John A. Macdonald. It was also the year the first electric street cars made their appearance in Ottawa, supplanting the horse-drawn vehicles whose winter comforts included pot-bellied stoves and straw-strewn floors.

Just three years earlier, the Chaudière Electric Light and Power Com-

pany had initiated the first household lighting service in Ottawa, supplying power for incandescent lamps. It commenced operations with a single, water-driven dynamo located beside the boiling cauldron of the Chaudière Falls, which still supplies significant quantities of electric power.

Regarded with less favor by lumbermen, the Chaudière Falls were circumvented almost a century earlier by the log chutes of Philemon Wright, who brought the first square timber raft from the pine forests of the upper Ottawa to Quebec City. The rafts were broken up into sturdy cribs above the falls and many a visiting dignitary enjoyed the thrill of a journey down the foaming chutes. The great Booth sawmills were later erected at this site.

Wood and Electricity

Mr. York first worked as a carpenter, assisting the electricians to wire houses; and in those days, wood and electrical equipment had a lot in common. Wooden cleats were used to fasten the conductors to the houses, and switchgear was mounted on mahogany panels with bare wire connections. In the generating stations, many of the gears which transmitted mechanical ener-

gy from the turbines to the overhead shaft to operate the generators were also made of wood.

As Mr. York recalls, the first domestic services were at 52 volts and the entire distribution system was ungrounded. In the earlier years, the power load was made up entirely of lights and a few industrial and commercial motors. Curling tongs were the only electrical appliances prior to 1900. According to this power pioneer's recollection, these were followed by smoothing irons, small heaters and stoves — in that order.

Competition between Chaudière and Standard lasted until 1894 when they amalgamated with the Ottawa Electric Light Company, which operated an arc lighting system on the streets. The company received a rude jolt early in its history when the Ottawa-Hull fire of 1900 threatened for a time to wipe out both cities. Four of the company's six power plants, several miles of distribution line and hundreds of customers' homes fell victim to the flames. Some of the generating equipment associated with the rehabilitation program is still in use today.

This company, under a variety of



ALTHOUGH he celebrated his 90th birthday recently, John York spends much of his time working in the garden of his Ottawa home.

by Don Wright

HE RECALLS when this plant on the Chaudière River first supplied power for household lighting in the capital city. The veteran, two-unit station, acquired by Ottawa Hydro-Electric Commission in 1950, is still in operation.

names, continued to serve the greater part of the city's electrical requirements until the Ottawa H.E.C. purchased its physical assets in January, 1950. It was known as the Ottawa Light, Heat and Power Company at that time.

Installed First Meter

The present Ottawa utility can trace its ancestry back to 1901 when Consumers Electric Company obtained a charter from the city to distribute power. As superintendent of the service crew, John York installed the first meter for this company. He had previously completed a six-year stint with the newly-formed Hull Electric Street Railway, which

included among its assets a ten-mile stretch of track between Hull and Aylmer Park.

Those were the days when a picnic jaunt by street car was enough to satisfy the gayest adventurer. Rockcliffe Park was the Ontario counterpart of Aylmer Park, and many a senior Ottawa citizen can recall tram trips to the old rifle ranges where sharpshooters of that era practised before the admiring eyes of the excursionists.

While the early meters were not sealed, Mr. York points out that people had not learned the tricks they know today, and they had a

(Continued on page 21)



ALONG THE ABITIBI

**Remote hydro-electric project,
Otter Rapids, will augment
supply of electricity
for power-hungry Ontario**

ONTARIO's storied Abitibi River is in the news again. A few months ago, the time-table of the Ontario Northland Railway was revised to incorporate the name of another station on its Cochrane-Moosonee line.

This new stop, 93 miles north of Cochrane, bears the same designation as Ontario Hydro's nearby Otter Rapids project where a construction and engineering force of some 600 men is advancing rapidly with the job of building a 350-foot-long powerhouse and the 1,900-foot main dam structure.

Destined for initial service in 1961

this remote development, with three units in operation, will produce another 131,000 kilowatts of electricity for the power-hungry industries, farms and homes of Northeastern and Southern Ontario.

Provision has been made in the design for five additional units to give the station a total installed capacity of 360,000 kw. These units will be added when a decision is reached to operate Otter Rapids as a peaking plant.

Reproduced on these pages are five of several views recorded recently at Otter Rapids. They pro-

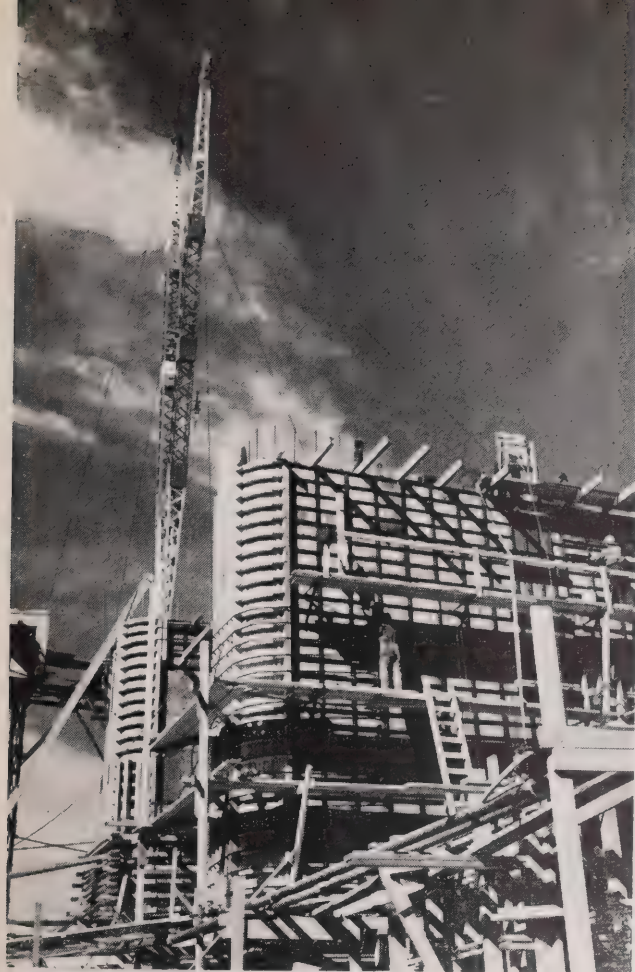
(Continued on page 27)

CONSTRUCTION of the first stage of the downstream cofferdam (left foreground) is under way at Otter Rapids. Work is also going ahead on a bulkhead section and wing wall.



BRIGHT SEPTEMBER SUNLIGHT and uniform paneling used in this wooden formwork combined to create a striking view of concreting work under way at the upstream end of two sluiceway piers.

TEMPORARY APERTURES in this 460-foot-high structure will help to form a strong link with another section of concrete to be poured at a later stage during completion of the main dam.



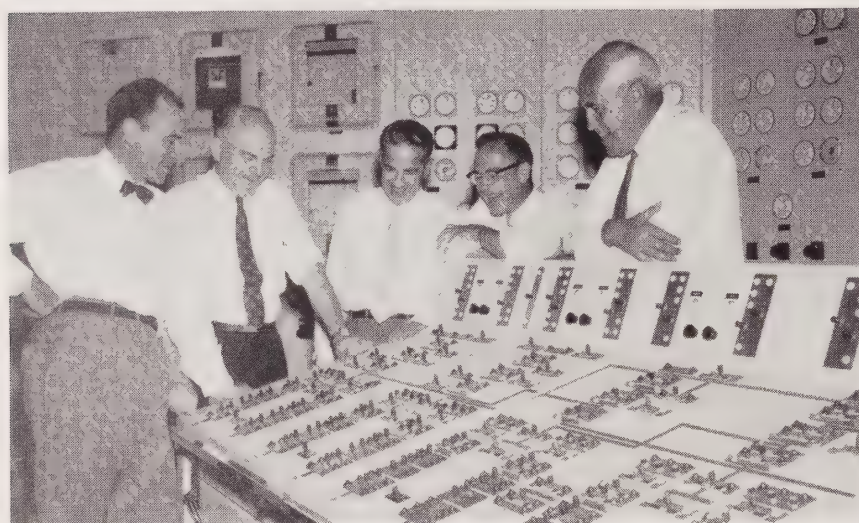
SOME 200,000 cubic yards of compacted material are being used to form the wing walls at either end of the main dam.

(Photographs by E. A. JOHNSTON)

TEMPORARY FORMWORK for the sluiceway section of the main dam towers above workmen in the foreground. The guy derrick is placing concrete for two sluiceway piers.



OCTOBER, 1959



TURN ABOUT'S FAIR PLAY

THE old maxim "turn about's fair play" lay behind Ontario Hydro's invitation to sales officials of Detroit Edison Company to pay a visit to Niagara Falls as guests of the Commission. Earlier this year, these hospitable, Michigan executives arranged a one-day sales seminar for some 60 Ontario Hydro and municipal utility representatives. To demonstrate its appreciation, Hydro entertained some 20 or more Detroit Edison officers, headed by Vice-President E. O. George, during a one-day tour of the Niagara area. In the

upper photograph taken aboard the Maid of the Mist, four Detroit Edison representatives (left to right): J. L. Chapman, G. S. Zilly, W. R. Milby and George Lahodny, admire the view of the American Falls. In the lower photograph four other Detroit guests are shown in the control room of the Sir Adam Beck-Niagara Generating Station No. 2 with Deputy General Manager J. M. Hambley, second from left. The visitors include (left to right); Dan Fierz, Paul Baumbblatt, H. R. Stevenson and E. J. Hurley.

MASTER STATION

(Continued from page 6)

other representing system clocks.

On the right are meters showing the loading of important interconnections, such as those with Hydro Quebec; the Niagara Mohawk Power Corporation and the Power Authority of the State of New York, as well as the Detroit Edison Company in the State of Michigan, plus instruments to record loadings on the Southern Ontario System's frequency changers, the interchange with the Northeastern Division and the output of thermal-electric plants.

Control Console

A new control console, located between the two operating desks in front of this panel, has one of the most important functions of all the equipment installed in the control centre.

Each day's hourly load is estimated and scheduled a day in advance by Harry McNaughton, load scheduler. The estimate is based on many factors, including interchanges with connected systems, seasonal demands and available resources. The load scheduler must also take generation costs into consideration when he is preparing his daily schedule.

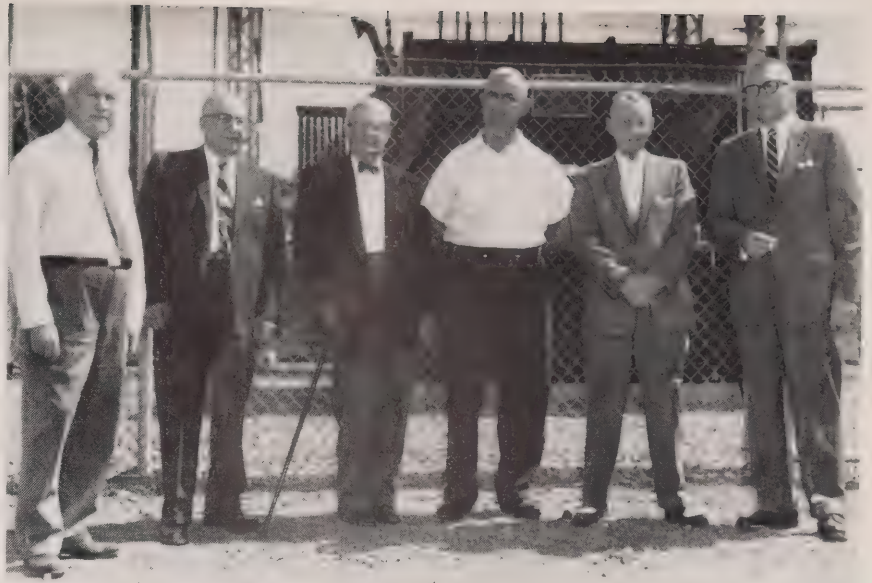
With this guide before them, the production supervisors register the established foreign tie-line loading on the console. Then this intricate device automatically sends out impulses to raise or lower the output of a predetermined regulating generating station as load variations occur on the Ontario Hydro system. In this way, the scheduled transfer of power on the interconnecting tie-lines is maintained.

When additional equipment is installed, the console will also be able to compute the next most economical block of generation, taking into consideration the cost of production and transmission losses involved in delivering the power to the load centre.

Another meter panel at the opposite end of the room provides information on the 230-kv lines at Richview. Space provision has been made to enable the relocation of the

system supervisor (with his own special meters) at this end of the room when necessitated by future staff and equipment expansion.

The growth of Hydro's Southern Ontario System and the increasing complexity of this system dictated the move from Hydro's Head Office in Toronto to the new centre earlier this year. Now located, both physically and electrically, closer to the high tension network, the modern facilities will permit more rapid restoration of service on the 230,000-volt system. With ample room for extending facilities to meet future power requirements, this master station is designed to maintain efficiency of operation and a satisfactory level of system security. ■



POWER PIONEER

(Continued from page 17)

healthy respect for the new "servant," which packed such a nasty wallop when handled improperly. As line superintendent with Consumers Electric, Mr. York was able to offer his top-notch linesmen as much as 30 cents an hour. It took longer to get the crews on the road in those days, but the two-horsepower wagons would start on the coldest mornings at the touch of a whip.

Consumers Electric became Municipal Electric in 1905 when the system was purchased by the city. At that time, Mr. York recalls, customers paid in the neighborhood of 8 cents a kilowatt-hour for their electricity — and considered it a bargain. In 1958, the city's domestic customers paid an average of 0.78 cents per kw-hr.

World's Lowest

Sir Adam Back persuaded the city to join forces with the growing Hydro movement in 1915, and since that time Ottawa Hydro has been able to carry out a series of substantial rate reductions. It now enjoys the distinction of having one of the lowest average electricity rates in the world.

Not every father is both parent and "boss" where his son is concern-

NAMED FOR A VETERAN

A NEW Hydro substation, which has substantially increased the capacity of Napanee's electrical system, will perpetuate the contribution of Charles A. Walters to the Eastern Ontario community. Mr. Walters (third from left in the accompanying photograph) has been manager of Napanee P.U.C. for the past 53 years — a unique record of municipal service. The new station, which was placed in service earlier this year to handle growing electrical demands by Napanee customers, was officially designated as the

Charles A. Walters substation. During the brief dedication ceremonies held recently, a plaque commemorating the event was unveiled. Present at the ceremony were (left to right): A. L. Dafoe, manager, Napanee Water Works; Napanee P.U.C. Chairman A. E. Holmes; Commissioner H. W. Vine, Mr. Walters, Thomas Gibbon, operations engineer, Ontario Hydro's East Central Region, and Stewart Dixon, consumer service department, East Central Region. ■

ed, but Mr. York enjoyed this dual role for at least 12 years prior to his retirement. His son, Fred, worked with Ottawa Hydro as a summer employee during his years at McGill University. He became a member of the permanent staff after graduation. He served as substation operator, draftsman and lineman before succeeding his father, who retired in 1938 as distribution superintendent. Fred was confirmed as planning and distribution engineer when Ottawa Hydro acquired the Ottawa Light, Heat and Power Company. He became manager in 1953, following the

resignation of George R. "Cap" Davis.

Meanwhile, Mr. York, Sr., has shifted his working environment from the office to the workshop and grounds of his gracious home on Ottawa's renowned Driveway. He looks back on the past with satisfaction. Duly impressed with the great technological advances he has witnessed in the last 70 years, he also puts in a word for the pioneers, who risked their resources and their careers on the future of electricity when it was little more than a laboratory phenomenon. ■

ELECTRICAL EXCELLENCE

ALL this and heating too! That was the reaction of scores who visited the Shrine model home at London's Western Fair this fall. Built to the highest electrical standards in Canada, the Gold Medallion home was the first in Ontario to display the Triple Seal of Quality.

Developed and designed by the Electric Home Heating Association of Ontario, a new organization formed earlier this year, this Triple Seal, when placed on or adjacent to the main electrical distribution panel in a home, assures the owner or prospective buyer that the manufacturer and contractor have complied with established industry standards to provide the best possible electric heating system (for award procedure, see "Seal of Quality"—*Ontario Hydro News*, September, 1959.)

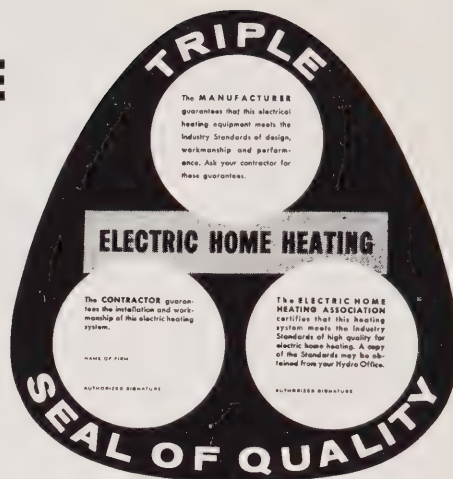
The building trade's newest tool, electric heating, has focused public attention on all-electrical living and stimulated interest in the Gold Me-

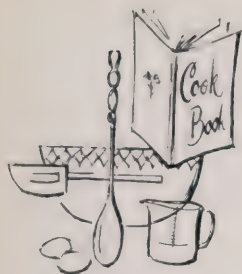
dallion Home. Installation of at least five major electrical appliances, with circuit provision for easy installation of at least five more, is one Gold Medallion requirement. When electric heating is the principal heating system, only three installed major appliances are required while circuit provision is made for an additional five. A Gold Medallion home must also conform to the finest illuminating engineering practices, have at least five special lighting features, and meet the minimum Red Seal standard of wiring adequacy.

Western Fair visitors were able to purchase tickets on the model home, which included all appliances and furniture, and even a lot on which the home would be located. Valued at \$28,000, the home was completely equipped electrically, including heat-

ing, appliances, lighting fixtures, water heater and laundry equipment. Standing in front of the home with the Gold Medallion awarded to the builder are (left to right): Hill Slean, field supervisor, Electric Service League of Ontario; R. M. Laurie, manager of Ontario Hydro's Western Region, with V. A. McKillop and Earl Nichols, general manager and chairman respectively of London P.U.C.

The photograph on the right depicts Hamilton's first Gold Medallion Home. As the sign indicates, it's just one of scores of new Ontario homes which are installing electric heating equipment. ■





LET'S CHAT

with Lois Hurst of Ontario Hydro's Homemakers' Service



Mrs. Suburbanite picks up the telephone and calls her neighbor: "Come on over for a cup of coffee at ten-thirty. The laundry is already in the washer and doing itself, and I have just put a pan of coffee cake in the oven. You must come over and try it."

Just imagine a housewife having time for a social hour on washday! The drudgery of laundering is a thing of the past. It takes so little time to load an automatic washer and set the controls. When the buzzer sounds just put the damp clothes into the dryer.

Laundering was a different proposition in days of yore. Samuel Pepys wryly records in his diary for April 4, 1666. "Home, and being washing-day, dined upon cold meat."

Mechanical washing machines first appeared in the Victorian era and what monstrosities they were! The modern trend is the "fine furniture look." The laundry twins pictured on this page would turn even the plainest utility room into a pleasant, extra room for living.

A simple push of a button selects the correct wash and rinse temperatures as well as speed and time of agitation and spin. Similarly a computer on the dryer automatically programs the right heat, time and speed of tumbling.

Faded clothes freshen up with tinting, so use the dyeing cycle built into many new models. Bleaches, too, can be added to the wash, but should be used with care. Chlorine-type bleaches affect the wash'n wear properties of resin-treated cottons.

and will turn wools and some rayons yellow. Fabric softeners injected into the final rinse keep clothes soft and fluffy, and reduce the clinging effect of static electricity.

Even rubber-soled canvas shoes can be machine-washed! Brush them out thoroughly. Tie the laces securely. Put them in the washer with heavy towels. Set the controls as you would for sturdy wash'n wears. Then dry at the "no-heat"



(Canadian Westinghouse Photo)

FURNITURE STYLING achieved with steel—embossed in a pattern—and wood grain materials, gives these new laundry twins a "furniture feel" and permits conversion of a starkly plain utility room into a pleasant, extra living room. Equally unique are the controls which automatically select any of 11 different wash, soak, rinse or tint program.

setting. A word of warning: they do make a noise as the dryer tumbles them.

Pillows get musty after a hot summer's use. Both kinds, feather and sponge-rubber, may be laundered. Follow the manufacturer's instructions. Be sure all seams are stitched

firmly or you could end up with a dryer full of feathers!

From time to time even the washer can stand a thorough cleaning. Use $\frac{1}{2}$ cup of household ammonia or borax and set it for a complete wash cycle with hot water and no clothes.

By now you must be wondering how Mrs. Suburbanite's coffee cake is doing. Why not try one yourself? It is easily made and any left-over makes a good dessert served with strained applesauce and a little ice cream on top.

Coconut Coffee Cake

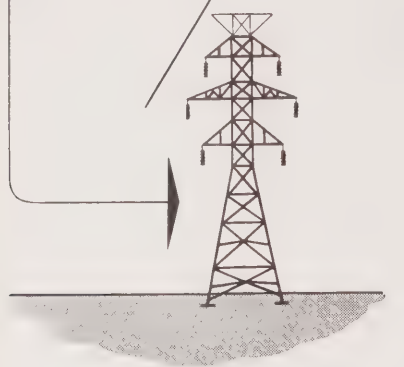
- $\frac{1}{4}$ cup shortening
- $\frac{3}{4}$ cup firmly packed brown sugar
- 1 egg, well beaten
- $1\frac{1}{4}$ cups all-purpose flour
- 2 teaspoons baking powder
- $\frac{1}{2}$ teaspoon salt
- $\frac{1}{4}$ cup desiccated coconut
- $\frac{2}{3}$ cup milk
- $\frac{1}{2}$ teaspoon vanilla

Cream shortening, sugar and vanilla. Beat in egg. Sift together flour, baking powder and salt and mix in the coconut. Add flour mixture alternately with the milk to creamed mixture. Spread in greased 9 x 9 or 6 x 10 inch pan. Sprinkle with crunchy streusel topping made by mixing the following:

- $\frac{1}{4}$ cup brown sugar
- 1 tablespoon flour
- 1 teaspoon cinnamon
- 2 tablespoons melted butter
- $\frac{1}{2}$ cup coconut or finely chopped nuts.

Bake at 375° for about 25 minutes. Serve while hot. ■

ALONG HYDRO LINES



Scarborough P.U.C. Launches Major Works Program

Six new substations are included in a \$2,320,000 construction program recently launched by the Scarborough P.U.C. to expand and improve its facilities.

In announcing this undertaking, Chairman C. H. Carslake revealed that three of the new, 5,000-kva substations would be the bungalow type and three would be modern, outdoor installations. Other work will include improvements to the office and service buildings and the construction of a garage.

Toronto Township Hydro Offers Heating Incentive

As an incentive to owners and contractors contemplating the use of electric heating in new houses, Toronto Township H.E.C. is offering up to \$50 to help defray the cost of installing the required 100-ampere service and an extra meter. These are required because the heating load must be metered separately. Payments will be made on the first 50 houses heated electrically. The policy will be reviewed at this time.

HELPING FUTURE HOMEMAKERS

ONTARIO'S home economics students will have an opportunity of learning how to be first-rate future homemakers with top-of-the-line electrical appliances. An important new program supplies such appliances free of charge to the home economics classrooms of schools throughout the province.

The program carries the theme, "learning today to live better electrically tomorrow."

Backed by a three-way agreement between Ontario Hydro, the municipal utilities and manufacturers, and endorsed by the Association of Municipal Electrical Utilities, the new program means that home economics students will have the advantage of learning how to be good homemakers through practical use of the very latest and best in electrical ranges, refrigerators, dishwashers and automatic washers and

dryers. In some schools, installations of electric hot water heaters will be made.

The plan is made possible through the co-operation of appliance manufacturers and municipal electrical utilities. School boards, working with their local utilities, may have the equipment installed without charge. Through a two-year replacement scheme, new models, as developed, will be available to the schools.

The home economics teacher, under the plan, will choose the make, style and color of the appliances to be installed in the school. It is felt that this public-service plan will not only assist schools to obtain the most up-to-date and efficient electrical appliances, but will give the students a much better understanding of how to get the most from their future homes. ■

WHEN HYDRO POWER FAILS

(The Dundalk Herald)

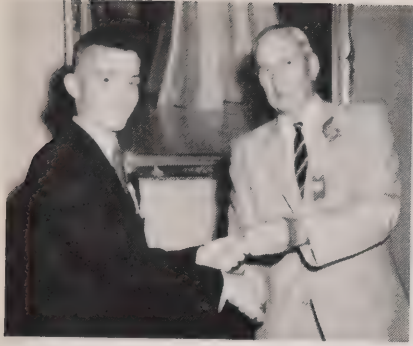
WHAT a dreary world this would be without hydro-electric power! We got a convincing demonstration of this, Sunday night, when the windstorm caused power failures in many parts of the province, plunging homes and streets in darkness. That was bad enough, but how to put in the evening without TV or radio, or being able to read with any degree of satisfaction! No wonder that a lot of people established an "early-to-bed" record for their adult years and decided to sleep off the black-out. People with oil-burning furnaces had another good reason for toddling off early to bed — they couldn't keep warm. So they piled on extra quilts and hoped for the best. In Dundalk's case, power was restored about 11 p.m., much to the relief of those who might still have been up at that hour.

And while we're wondering how we could enjoy life without hydro, let us have a thought and kind words of praise for those who braved

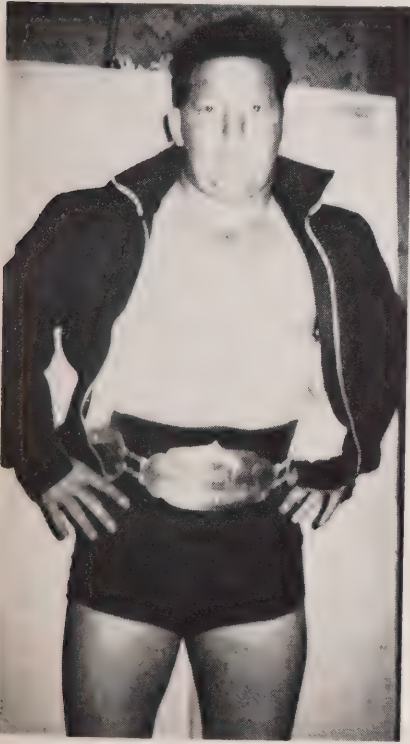
the storm and set about to repair broken lines and restore power. These are "modern heroes" at times like this and a grateful public says "thank you."

While on the subject of hydro power and our dependence on it, let us take a look around our homes and premises to see if there are places where we could take still further advantage of it for happier living. Ontario Hydro has a surplus of power now and there is much hydro-operated equipment which could be put to good use in the modern home.

In the words of Hydro, we can "Live Better Electrically." An experience like Sunday night shows how well we are living — and life can be better still if we take advantage of available modern facilities. In these days, it isn't a luxury, it's just using common sense. Hydro has taken a lot of the drudgery out of living and it can still make things easier in the average home. ■



Guest speaker at the Canadian National Exhibition's Young Canada's Day Luncheon in Toronto, Walter T. Parnaby, 17, of Orillia, is presented with a memento of the occasion by Harry Price, CNE president. Walter was a winner in the 1959 Ontario Public Speaking Contest, co-sponsored by Ontario Hydro and the Ontario School Trustees' and Ratepayers' Association.



HYDRO CHAMPION — Canada's new middleweight wrestling champion is Bill Foster, an employee of Brampton Hydro-Electric Commission. Mr. Foster, 26, won the crown in a victorious title match with Gideon Gideon from Belfast, Ireland, in Thornhill Arena, recently. He has been wrestling for five years.

Water Heater Rates Reduced at Waterloo

Active promotion, plus economies effected with the use of automatic peak load controls, have enabled

HYDRO AIDS CONSERVATION

FOR THE THIRD successive year, Ontario Hydro has assisted the Dryden High School Conservation Camp, jointly sponsored by the Dryden High School Board and Dryden Paper Company. A. E. Fallen, operating supervisor, Northwestern Region, was again in charge of water conservation studies at the camp held at the Contact Bay Landing Depot Camp of the Dryden Paper Company on Lake Wabigoon. Stressing the importance of water for the generation of electrical energy, Mr. Fallen, shown in the accompanying picture addressing the class, excited the minds of the young people in attendance with his stories of water requirements in the industrial age.

Attending the course were some 30 Grade X pupils. They were selected on the basis of academic achievement and interest in conservation.

Other instructors on the course came from Toronto, Guelph, Kenora and Dryden. They represented the Ontario Departments of Lands



and Forests, Agriculture, Planning and Development, as well as Dryden High School, Dryden Paper Company and the Ontario Forestry Association.

On-the-spot instruction was given the pupils attending on matters pertaining to the wise use of forests, soils, waters, and wildlife. Visits were made to the Eagle River power plant of the Dryden Paper Company and to bush operations, soil pits, farms, gravel beds, lakes and other points of interest. ■

Waterloo P.U.C. to reduce its electric flat rate water heater rates by ten per cent.

More than 279 flat-rate water heater customers have been added since November, 1958, and about 1,800 of the utility's 2,500 flat-rate water heaters are now automatically controlled. The new flat rate will reduce utility revenue by approximately \$7,000 in 1960, according to present estimates.

Four More Utilities Set Lower Hydro Rates

Hydro customers in Point Edward, Midland, Preston and West Ferris will receive more for their money as the result of rate revisions recently announced by the municipal utilities of their respective municipalities.

Reductions ranging from 6.1 to 9.8 per cent in Hydro rates for resi-

dential, commercial and industrial customers marked the beginning of a new program inaugurated by the Point Edward P.U.C. The local commission is confident that load growth and increased kilowatt-hour sales will offset reduced revenue from the lower rates.

Chairman Alex MacIntosh, Midland P.U.C., announced that his community would have one of the lowest electrical rate structures in Ontario as the result of a decrease recently approved by Ontario Hydro.

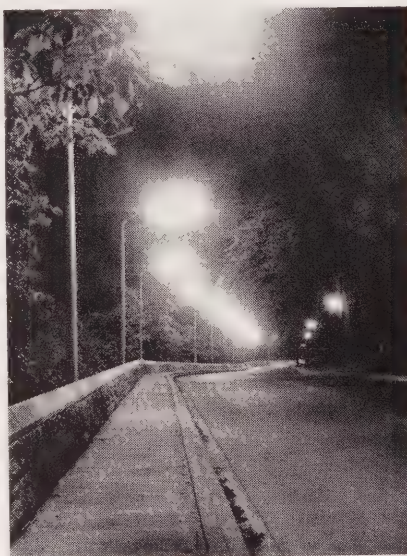
New rates effective October at Preston, will reduce the utility's estimated 1960 profit to approximately nine per cent.

The rate revisions announced by the West Ferris H.E.C. will affect all classes of customers. Based on 1958 consumption, the new rates will reduce revenue by 9.5 per cent.



MORE LIGHT

ZERO-HOUR ORDER — to “turn on the lights” on River Road at Niagara Falls, Ont., came from Mayor Franklin J. Miller (centre, in the accompanying photo). Thomas Barnes, chairman, Niagara Falls Hydro Commission, left, and Fred M. Cairns, vice-chairman of the Niagara Parks Commission, are shown listening in. The new system provides three times more illumination than the previous lamps, thanks to the fluorescent fixture shown (right). Extending from Hiram Street to the Whirlpool Rapids Bridge, the new lights greatly improve visibility on the busy road, as well as enhancing the appearance of the city from the United States side of the Niagara River. ■



Named Rural Service Superintendent

Manager of St. Thomas Operating Area for 2½ years, W. H. Correll has been appointed Rural Service Superintendent in Ontario Hydro's Consumer Service Division, Toronto.

Following graduation from the

University of Toronto, with a B.A.Sc. in 1949, Mr. Correll joined the Commission's Consumer Service Division and was later transferred to the Western Region, serving at London and Windsor. He was appointed Manager of Dorchester Operating Area in April, 1956, and transferred to St. Thomas in January, 1957.

CLAUDE McMANN

ASSOCIATED with Sarnia Hydro-Electric Commission for over 35 years, Claude L. McMann, 71, died at Sarnia General Hospital. He retired as manager of the local utility in 1952, but was engaged in Red Seal promotion work for the Sarnia Commission until his death.

Mr. McMann, who was born and educated in Richmond, Michigan, started his career as a lineman with Chatham P.U.C. He served with the 186th Battalion, Canadian Infantry, during World War I.

A few months after he joined the Sarnia system as foreman, Mr. McMann was appointed superintendent, a position he held for approximately 25 years. In 1941 he was appointed manager, succeeding J. E. B. Phelps, father of the present manager, Charles S. Phelps.



C. L. McMANN

During his career with Sarnia Hydro, Mr. McMann witnessed two changes in the city's electrical frequency. When Sarnia Hydro was formed in 1916, it took over the assets of the Sarnia Gas and Electric Light Company. Soon after Mr. McMann and the late Mr. Phelps were responsible for changing over system and customer equipment from 60 to 25 cycles to utilize hydro-electric power supplied over Ontario Hydro lines from Niagara River plants. In 1951, Sarnia became the first major municipality to revert to 60-cycle power under Ontario Hydro's frequency standardization program.

Mr. McMann is survived by one daughter, Mrs. Eleanor McConnell, of Sarnia.

The first daredevil to go over Niagara Falls in a barrel was a Mrs. Anna Edson Taylor, in 1901. She carried an anvil for ballast, was badly bruised but survived.
—Quick Canadian Facts

ONTARIO HYDRO NEWS

ALONG THE ABITIBI

(Continued from page 18)

vide a concept of the feverish construction activity in this lonely section of Ontario where a quarter-million cubic yards of concrete will be used in constructing the three-unit powerhouse, the 310-foot spillway section, and the 500-foot-long bulkhead sections of the main structure which will span the Abitibi. In addition, 200,000 cubic yards of earth and granular material will be compacted to form wing walls on either side of the main dam.

This sturdy barrier will raise the level of the river by 110 feet, the new forebay extending back to the tailrace of Hydro's older Abitibi Canyon Generating Station, some 23 miles upstream. Already Otter Rapids is linked with the latter plant by a 115-kv transmission line, which furnishes power for myriad construction purposes. When the plant goes "on the line," however, this power flow will feed into the expanding Hydro system through a new gathering station at Abitibi Canyon, and thence into a revolutionary, extra-high-voltage transmission network (see *Ontario Hydro News*—Sept. 1959). ■

London P.U.C. Introduces Machine Billing System

Automation has come to London P.U.C. in the form of a machine billing system which utilizes some 200,000 punch cards containing pertinent data on some 40,000 Hydro and water customers.

The switch to punch-card billing will release several employees for other duties, and is expected to handle a 50 per cent increase in customers without additional staff. Meter readers now record their information direct on punch cards with a special pencil which activates the processing equipment. A new billing and accounting section has been established on the main floor of the recently-renovated utility office.

PETERBOROUGH PROMOTIONAL PLAN

PETERBOROUGH citizens are going to get an imaginative assist to "Live Better Electrically."

Peterborough Utilities Commission has instituted an approved plan for the use of available funds to provide financing for its customers to purchase major electrical appliances from approved radio, television and appliance dealers on a time-payment plan.

In effect, Peterborough U. C. will buy the appliance from the dealer and pay him the retail price in cash—less any trade-in allowance and less a charge of five per cent of the retail price with a minimum of \$5 to cover the risk of repossession.

The plan may include any major wiring to appliances but only where such wiring is installed by the dealer making the sale. In this way, the utility will be required to deal with only one party in any specific transaction.

Arrangements have been made

for customers to repay the utility on their regular Hydro bills on a time-payment plan.

The maximum repayment period varies with the amount of the sale. For purchases between \$100 and \$149, the customer is allowed 18 months, from \$150 to \$199.99—24 months, from \$200 to \$299.99—30 months and over \$300 — 36 months.

Customers will also pay a carrying charge of a flat 6 per cent of the amount to be financed for each year of the repayments.

The utility will approve the customer's credit and the dealer's selling price before the sale is accepted.

This promotional campaign is designed to encourage the use of electricity by making appliances available on a basis competitive with other equipment. The plan, it is expected, will also renew dealer interest in the sale of electrical appliances. ■

Port Hope Expands Hydro Headquarters


Increased power consumption has necessitated expansion of Port Hope Hydro-Electric Commission offices, at an estimated cost of \$10,000.

Plans call for the use of the lower floor for offices, while the upper floor will accommodate a board room and secondary offices.

Sarnia Sets 100-Ampere Service Minimum

Sarnia Hydro Commission has joined the growing list of Ontario utilities requiring installation of 100-ampere services in all new houses. The Sarnia Commission has further ruled that the new house services include a distribution panel providing a minimum of 16 circuits.

The newly-formed Sarnia Branch of the Electric Service League of Ontario was instrumental in having the regulations enacted. They became effective on September 1.



BETTER COMMUNICATIONS — Near the top of a new 120-foot radio tower, Ontario Hydro's St. Thomas Area linemen, Corrie Davis and Jim Stevenson, make final adjustments. It was pointed out recently that the new facilities will result in improved communications in the St. Thomas Area, enabling the St. Thomas office to keep in constant contact with work crews. Night coverage of Aylmer and West Lorne areas will be provided.

off the wires

We liked the story of Robert MacDonald, meter reader with Ontario Hydro's London Area, who is credited with saving a child's life under the most trying circumstances imaginable.

On his rounds in a London, Ont. suburb, he was attracted by the cries of two-year-old Tammy Black. The toddler had swallowed a whole sucker (minus the stick) and it had lodged in the child's windpipe. Instructing the mother to summon medical assistance, the quick-thinking meter reader told a neighbor to suspend the choking youngster by her ankles while he reached into her throat. Just about this time, things got complicated. Rusty, the family dog, concerned for his young mistress' safety, crept up to lick her face. When the canine saw MacDonald slapping the child on the back to help dislodge the candy, it leaped on him.

Fortunately, the story has a happy ending. The sucker popped out of Tammy's mouth before Rusty could inflict serious injuries on the ingenious Hydro representative.

Like many good Samaritans, he modestly slipped away before the distraught mother could identify or thank him, but his courageous act came to light a day later in the columns of the *London Free Press*.

This incident has many important aspects. The chief one, of course, is the fact that a human life was saved. It also focuses attention on the importance of first-aid training for Hydro employees. Competent, intelligent action in such emergencies increases public confidence in any organization.

* * *

Getting a little flabby around the waist these days?

For the next six seconds, try this. Suck in your stomach — hold it while you count up to six — then relax. Health authorities say exercises like this one taken every day can do you more good than stren-

uous weekend workouts. A recent edition of *Reader's Digest* lists several of these painless, "six-second exercises," which you can do almost anywhere. Among them are these: 1. Stretch. You can do this lying down, by stretching your arms overhead till you feel the pull down to your waist; standing, by pushing your back against a wall until you touch from head to heels forward; 2. Expand your chest. Take several deep breaths and see how far you can stretch your belt. This tightens stomach muscles and increases your breathing capacity; 3. Flex your arms. TV Western hero Hugh O'Brian presses a clenched fist into to someone. Opening and closing your hand is another unobtrusive way to build muscle strength; 4. Bend your legs by squatting, climbing stairs or walking. Charles F. Kettering of General Motors used to climb stairs — two flights up and three down — rather than wait for the elevator. The exercise helped him stay active until his death at the age of 82; 5. Firm your muscles. TV star Dave Garroway keeps his arm and torso muscles tight by flipping a golf club or an umbrella with the heavy side away from him. Bouncing on a hard chair will do wonders for "secretarial spread."

Performed faithfully every day, these exercises will soon have you stronger, slimmer and peppier, says author Keith Monroe. His article is titled, "Six Seconds for Exercise."

* * *

New York City tour guides often tell visitors there are only two kinds of people in that big metropolis: the quick and the dead.

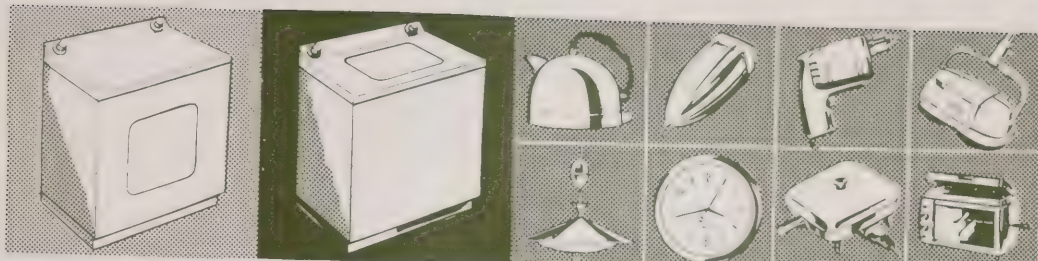
The same thing holds true in plenty of Canadian cities like Toronto and Montreal. A recent letter from A. W. Manby, Ontario Hydro's general manager, to Commission staff in the Metropolitan Toronto area pointed up the appalling fact that Ontario's capital has

an average annual death toll from motor vehicle accidents of some 80 persons. The statistics on pedestrian accidents in Toronto reveal some shocking facts: over 80 per cent of all accidents involving pedestrians are caused by pedestrians; more than 92 per cent of the pedestrians involved were not under the influence of alcohol nor had they any physical defects. In other words, they were in full control of their faculties when the accidents occurred; more than 50 per cent of pedestrian accidents occur in residential areas.

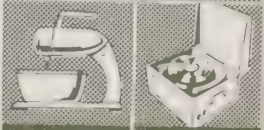
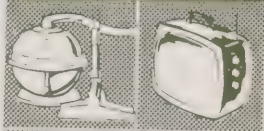
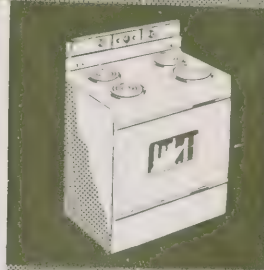
Mr. Manby's letter referred to the campaign instituted by the Committee for Pedestrian Safety under the leadership of Metropolitan Toronto Chairman Fred Gardiner. Visitors to Toronto would do well to remember that this city now has crosswalks. When a pedestrian wants to cross the street at a crosswalk, he should first give a hand signal — by extending the arm straight out—to indicate to motorists that he wishes to cross. To emphasize this, the committee has adopted the slogan "Point Your Way to Safety."

* * *

People who complain that it is impossible to keep up with all that's going on in today's busy world perhaps forget that every age is packed with incidents for those who live in it. For instance, here are a few of the "headline" events, culled from the Book of Knowledge, that occurred just 100 years ago this year . . . "John Brown's raid on Harper's Ferry touched off the American Civil War; in England the Cornhill Magazine was established; in Africa, Livingstone discovered Lake Nyasa. In the same year Queensland became a separate colony, work started on the Suez Canal, Blondin crossed Niagara Falls on a tightrope, the first passenger elevator in a hotel caused a sensation in New York, and the first Pullman sleeping car was placed in service."



Range	
Washer	
Drier	
Refrigerator	
Kettle	
Razor	
Power Tools	
Polisher	
Lamps	
Clock	
Fry Pan	
Broiler	
Electric Casserole	
Fan	
Steam Iron	
Electric Blanket	
Vacuum	
TV—Portable	
Blender	
Mixer (portable)	
Mixer (table)	
Record Player	
Bottle Warmer	
Electric Train	
Projector (slide)	
Table Lamp	
Radio	
Percolator	
Toaster	
Grill	



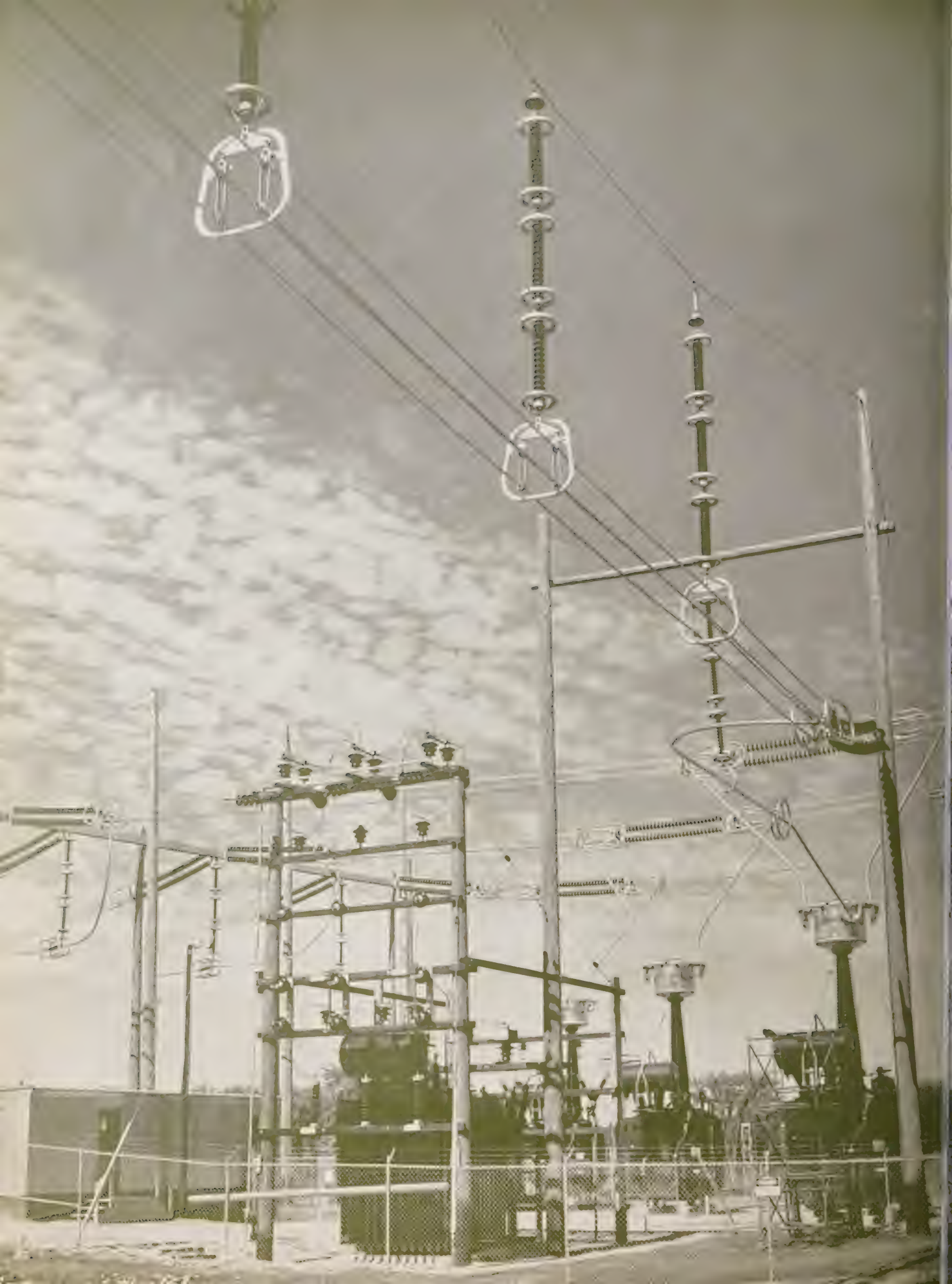
here's your handy hint list

This Christmas, make sure you're one of the lucky people who receive electrical presents.

Modern electric appliances are miracles of efficiency. They're beautifully designed and cost so little to use.

Just check the appliances you want on this handy list (these are just a few... you may want to make your own list) and leave it where it will be noticed. Over the bathroom mirror is a good place.

live better **ELECTRICALLY**... the safe clean modern way!



NOVEMBER, 1959

SILVER FALLS ON THE LINE

ONTARIO HYDRO NEWS





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COVER PHOTOGRAPHS

Yes, you guessed it. Our front cover this month depicts Ontario Hydro's new hydro-electric plant, the Silver Falls Generating Station, northwest of Port Arthur, which was officially opened a few weeks ago (see page 2 for further details). The back cover presents an impression of the two-mile-long tunnel which serves this new station — before they let the water in, of course.

HYDRO NEWS

"GO NORTH, YOUNG MAN"

A recent article in the *Timmins Daily Press* proudly proclaims: "Northern Ontario on the March."

And there is concrete evidence to support that claim. The *Timmins* newspaper article referred specifically to the plans for developing Moosonee, Ont., on James Bay, as an ocean port. A statement issued a few weeks ago by Col. C. E. Reynolds, chairman of the Ontario Northland Railway Transportation Commission, envisages a population of 25,000 for Moosonee and adjacent communities in the next quarter-century.

This spirit of courageous optimism and planning for the future is evident wherever one travels in Northern Ontario today. The formation of the Ontario Northland Municipal Electric Association, which held its first formal meeting at Sudbury during October this year, can justifiably be regarded as another manifestation of the pride that Northern Ontario citizens have in the economic, social and political contributions they have made — and are destined to make — to the Province as a whole.

Addressing delegates at this meeting, Ontario Hydro's Northeastern Region Manager, H. R. D. Graham, presented an interesting and encouraging panorama of facts that not only indicated an accelerated tempo of industrial and mining activity, but fully demonstrated the Commission's implicit confidence in the potential of this section of Ontario.

Against a background of expanding electric power demands, Ontario Hydro construction forces are proceeding rapidly with the job of building a 131,000-kilowatt generating plant at Otter Rapids on the Abitibi River, in addition to completing installation of a 45,000-kw unit at the upstream Abitibi Canyon station earlier this year. Meanwhile, Mr. Graham reported, surveys and geological explorations are going forward at potential hydro-electric sites on four other rivers.

The same healthy condition exists in Northwestern Ontario. In this issue we record the official opening of the new Silver Falls Generating Station, 30 miles northwest of Port Arthur. Simultaneously we present evidence of construction progress at the site of Hydro's first Northern Ontario thermal-electric plant near Fort William.

Addressing the audience at the Silver Falls opening

ceremony, Ontario Hydro Chairman James S. Duncan pointed up the fact that the Commission, since 1945, has expanded its generating capacity by no less than 331 per cent — the largest percentage increase of any of Hydro's systems — to meet the rapid economic growth of Northwestern Ontario.

Silver Falls represents the ninth new source of power completed by the Commission since the end of 1945. Although comparatively modest in size, this "engineering project of unusual complexity" has added another 45,500 kw and raised the total resources of Hydro's Northwestern Division to more than 600,000 kw, Mr. Duncan told the audience.

Sound logic stands behind this energetic program of electrical system expansion; for Northwestern Ontario, without any doubt, typifies the spirit of Canadian enterprise which has been so evident in the last few years, and which has been responsible for the nation's astonishing progress.

If proof is necessary, just look at the power demands of this section of the Province, which have jumped by 125 per cent to a total of more than 448,000 kw since 1950. After a short period of recession in 1957 and 1958, electrical loads have resumed their upward spiral, averaging no less than 15 to 20 per cent in recent months.

Several new hydraulic sites, now being investigated for possible development, and an extension to an existing station, will progressively augment Northwestern Ontario's electrical resources in the next two decades. In addition, the Thunder Bay plant will add another 100,000 kw when placed in initial service during 1961. The ultimate capacity of this important plant will total one million kw.

There is confidence that the ambitious plans of the enterprising men who have caught a vision of the growth potential of Northwestern Ontario will have a dynamic impact on the future electric power requirements of this area. Hydro's present long-term forecast indicates that power demands will total 1,860,000 kw by 1980 — four times the primary requirements of the region in December, 1958.

Surely, Horace Greeley, if he had been living in Ontario today, would have advised young men "to go North."

SILVER FALLS "ON

**Ontario Prime Minister
and Hydro Chairman jointly
inaugurate new
Kaministiquia River generating
station**

THE HISTORIC Kaministiquia River, once an important route for fur traders travelling between Fort William and the Canadian West, took on new economic significance last month with the official opening of Ontario's Hydro's Silver Falls Generating Station.

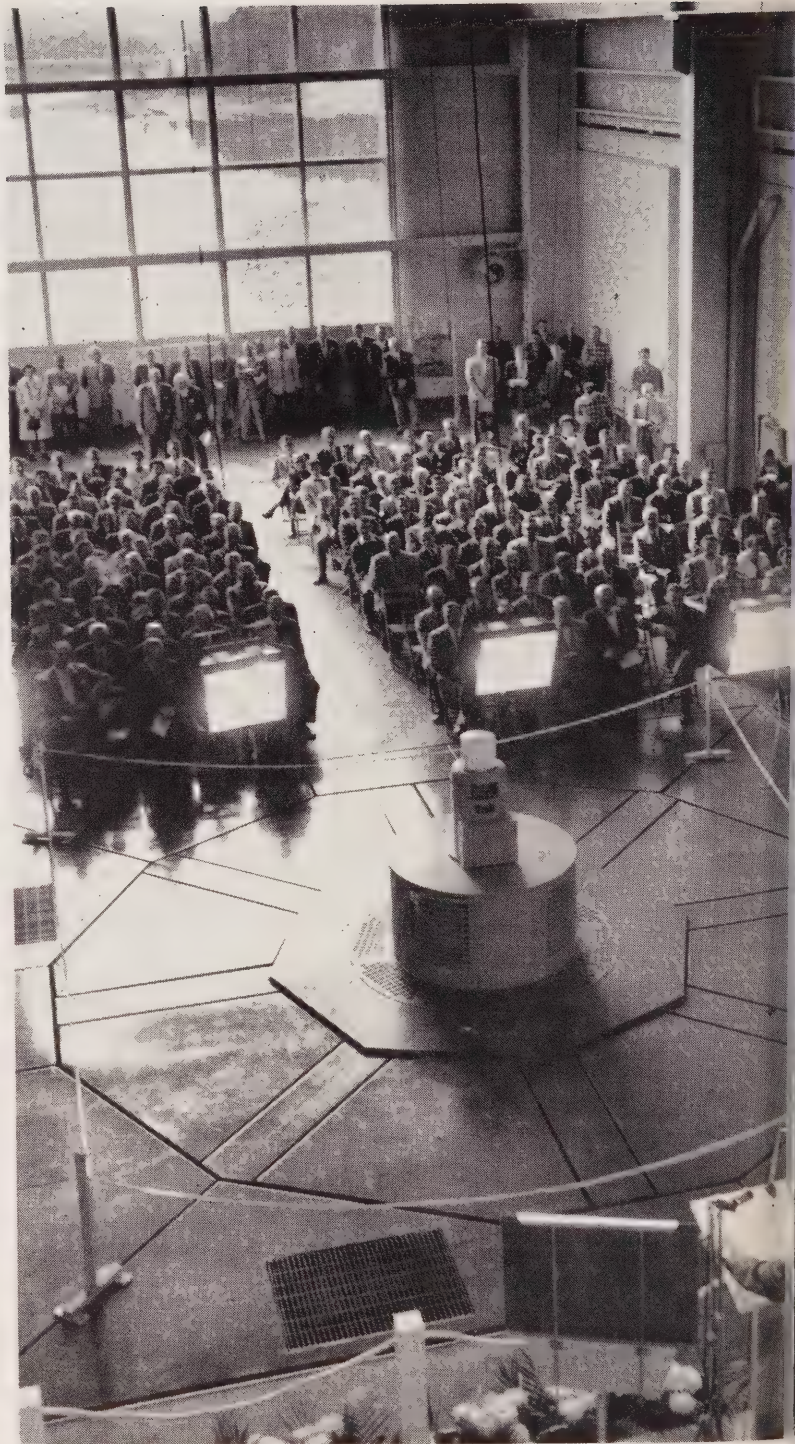
More than 200 guests assembled in the powerhouse and watched Ontario's Prime Minister Leslie M. Frost and Hydro Chairman James S. Duncan press a button which started up the 45,000-kilowatt generating unit. Picking up speed quickly, the humming generator began delivering power into the Northwestern transmission network — raising Hydro's total resources in the region to 612,000 kilowatts.

Situated on the Kaministiquia River 30 miles northwest of Port Arthur, the \$16,500,000 Silver Falls plant first produced power Sept. 1.

The opening ceremony, however, was the formal climax of more than 2½ years of construction work, which provided employment for 400 persons during the peak period.

Pipers and drummers from the Port Arthur's Girls' Pipe Band added color and music to an import-

(Continued on page 4)



THE LINE"

MORE THAN 200 guests assembled in the powerhouse for the ceremony. The exciter of the 45,500-kilowatt generator is also visible in the foreground.

MAP of Northwestern Ontario depicts location of several new plants in Northwestern Ontario.



◁ PREMIER Leslie M. Frost and Ontario Hydro Chairman James S. Duncan jointly pressed the button to start up the new generator.

EXTERIOR VIEW of the new, \$16,500,000 Silver Falls station, which is located on the Kaministiquia River northwest of Port Arthur.





OCCUPYING a dominant position above the powerhouse, this 180-foot high surge tank has a capacity of 1,250,000 gallons of water.

ant occasion in the electrical progress of Northwestern Ontario. It was also an important day for the 20 children attending the Silver Falls project school. Premier Frost gave the children a day off to attend the opening ceremony, and was the object of happy smiles when he promised them a second holiday in the following week.

During the ceremony, Mr. Frost drew attention to the tremendous growth in power demands in the last 15 years and the importance of projects such as Silver Falls to Ontario's economic progress.

"Ontario has a great future," the Premier said, "but it can only expand and prosper if there is adequate credit—at reasonable rates—available to the province and its municipalities for the creation of new assets such as this generating station."

Noting that Ontario Hydro would need approximately \$2,100,000,000 during the next 10 years, Mr. Frost said the financing of Hydro's essential undertakings in the future



HAPPY PUPILS of the Silver Falls colony school were given a holiday by Premier Frost to attend the opening ceremony. The camp school will be closed this month.

is a matter of "considerable concern."

He suggested that the Bank of Canada establish an advisory board on which provinces and municipalities could rely for support in their money-raising activities. Such support, Mr. Frost continued, would enable the provinces and municipalities to plan their expansion programs with confidence.

"Hydro works and capital works cannot be turned off like a tap. They should go ahead if Canada is to progress and prosper, and if Ontario is to progress and develop the way she is capable of doing," Mr. Frost said.

Complex Project

Mr. Duncan, who introduced the Premier, called the Silver Falls development "an engineering project of unusual complexity." He noted that Hydro's generating capacity in the Northwest had expanded by 331 per cent between 1945 and 1958—the largest percentage increase of any system.

Predicting that the region's pri-

mary electrical requirements would quadruple by 1980, the Chairman said future needs would be met by the development of remaining hydraulic sites and the construction of thermal stations burning conventional or nuclear fuel.

Seven hydraulic sites on the English, White and Little Jackfish Rivers, and the possible enlargement of an existing station are now being investigated, he explained. The development of these power resources over the next two decades would add approximately 200,000 kilowatts of generating capacity to the Northwestern system.

Additional needs for electricity, Mr. Duncan continued, would probably be met by new thermal plants, such as the Thunder Bay station now under construction at Fort William—"some of which, no doubt, will be powered by nuclear energy."

Eventually, he added, the Northwestern power system would be linked to the Northeastern and Southern Ontario grids.

(Hydro's Northwestern system

now is interconnected with Manitoba Hydro.)

Following the opening ceremony, guests attended a luncheon in the project dining hall. Brief remarks were made by Mr. Duncan and Mr. Frost, Hon. George C. Wardrope, Minister of Reform Institutions; Bertram Merson, president of the Ontario Municipal Electric Association, and Ray Pfaff, president of the Association of Municipal Electrical Utilities.

Guests included members of the Ontario Legislature, officials of district municipalities, the OMEA and the AMEU, representatives of chambers of commerce, paper and mining companies, supply companies, members of the Commission and executive representatives of Ontario Hydro.

Two-Mile Tunnel

The new power development (see *Ontario Hydro News*, November, 1958) takes its name from Silver Falls, the largest of several cataracts in a winding, five-mile section of the

(Continued on page 6)



MEMBERS of the Port Arthur Girls' Pipe Band added color and music at Silver Falls—ninth new power source placed in service by the Commission in Northwestern Ontario since the end of World War 2.



MANY PROMINENT northern Ontario citizens were among the guests at the recent ceremonies marking the official opening of Silver Falls. The northern plant will be remotely controlled from Port Arthur T.S.

Kaministiquia River. To obtain the fullest advantage of a 350-foot fall in this section of the river for the generation of electricity, a two-mile long tunnel was bored through a granite ridge separating Dog and Little Dog Lake.

Excavation for the tunnel, which links an intake canal at Dog Lake with the powerhouse at Little Dog, took 11 months. Hard rock miners, working three shifts a day, six days a week, excavated 104,000 cubic yards of rock before the job was completed.

For the operation of the station, water from Dog Lake is diverted through a 900-foot long intake canal, down a 280-foot vertical intake shaft to the tunnel. The 10,400-foot hydraulic tunnel is connected to the powerhouse by a penstock, 500 feet long.

The 180-foot-high surge tank north of the powerhouse is one of the project's most impressive structures. With a capacity of 1,250,000 gallons of water, the tank is connected to the power tunnel by a shaft 204 feet deep. Primary purpose of the tank is to act as a safety valve against the tremendous pressure of the two-mile column of water in the tunnel should the turbine be shut down quickly. It also provides a ready supply of water to take care of sudden increases in electrical demands on the generator.

The Silver Falls plant, controlled from Hydro's Port Arthur Transformer Station, is the fourth postwar station in the Northwestern Region to be operated by remote control. Like a robot machine from the pages of science fiction, the plant will deliver 45,500 kilowatts of power into the Northwestern transmission system without a single operator or technician within miles of its control panels.

So complete is the control of the automatic supervisory equipment that an operator at the Port Arthur transformer station 30 miles distant can start up the generator at Silver Falls, bring it up to speed, and put it on the line by simply pressing a button.

—by P. J. Maitland.



AERIAL VIEW OF SILVER FALLS PLANT AND SURGE TANK.

SILVER FALLS FACTS

Location	Kaministiquia River, 30 miles northwest of Port Arthur
Construction started	April, 1957
First power	September 1, 1959
Opening ceremonies	September 25, 1959
Generating capacity	45,500 kilowatts (61,000 horsepower) from one unit
Head	338 feet
Estimated Cost	\$16,500,000

Principal Structures

Tunnel—10,400 feet long between intake at Dog Lake and powerhouse at Little Dog Lake. During excavation, which took 11 months, work advanced at an average rate of 41.5 feet a day. A total of 104,000 cubic yards of rock was removed. Finishing the tunnel to a diameter of 14½ feet required 41,600 cubic yards of concrete. The tunnel holds 10,300,000 gallons of water.

Powerhouse—34,300 cubic yards of rock were excavated for the powerhouse. Construction of the powerhouse required 7,500 cubic yards of concrete.

Intake Structure—40,700 cubic feet of earth and 14,400 cubic yards of rock were excavated for the intake structure. Depth of the rock cut was 95 feet. The intake canal is 900 feet long with a bottom width of 54 feet. The steel head gate weighs 76 tons.

Intake Shaft—Sunk vertically 280 feet from the intake structure to the tunnel.

Surge Tank Shaft—Sunk vertically 204 feet to the tunnel from a point approximately 900 feet above the powerhouse. The steel surge tank is 180 feet high and 38 feet in diameter. It holds 1,250,000 gallons of water.

Turbine and Generator—The turbine, manufactured by Canadian Allis-Chalmers Limited, has a capacity of 62,000 brake horsepower. Water will flow through it at a rate of 1,800 cubic feet per second. Capacity of the generator is 45,500 kilowatts. It was manufactured by Canadian Westinghouse Company Limited.

Penstock—A 500-foot long penstock and tunnel liner weighing 485 tons connects the tunnel portal with the powerhouse. The diameter varies from 14 feet, five inches, at the tunnel to nine feet at the powerhouse.



British press gangs once forced innocent bystanders into service on warships. This gave rise to the saying, "pressed into service."

HOW DID YOUR PET EXPRESSION START?

IT'S FASCINATING to trace the derivation of everyday expressions. Phrases that seem as modern as Dixieland jazz may have come down from old Greece or Rome. Other seemingly modern expressions started with men who manned our early sailing vessels, with cowboys in the old West, or natives of the Ozark country.

"Pass the buck" offers a good example of the way unusual words and phrases become part of our language. In old-time poker games, the buck was an object placed in front of the dealer, usually a knife. The name, buck, probably derived from knives with buck-horn handles. When a player didn't want the deal, he would ante, then pass the buck, giving the job to someone else.

"Deadhead" started as a railroad term, referring to a passenger riding free on a pass, or an empty car in a moving train. It progressed logically from this to its present use, to describe someone who doesn't pay his way.

For obvious reasons, inflatable life-preservers were called "Mae Wests" in World War II, as were tanks with two turrets.

Among the old Romans, salt was considered essential and salt allowances were given regularly to soldiers. This explains how our word, "salary," is derived from the Latin word for salt—*salarium*—and why the phrase, "to earn your salt," has its present meaning.

"Kentucky position" means fourth place in a race. Legend has it that this expression started with Ken-

tucky trainers who kept absent owners happy by reporting that their horses finished fourth, when in reality the nags finished sixth, seventh or eighth.

When baling wire is removed from hay, it's usually twisted into an unsightly mass before being thrown away. That's why we mean a person is twisted or crazy when we say he "has gone haywire."

"Put your shoulder to the wheel" has been handed down from stage-coach days when male passengers were expected to get out and push whenever the stage got stuck.

"Back water," in the sense of taking back an opinion or backing out of an agreement, comes from a nautical term meaning to row backwards.

"Let's push off," meaning let's get going, is derived from the order given in pushing a boat away from a wharf.

That tasty melted-cheese-on-toast dish — is it Welsh Rabbit or Welsh Rarebit? The former is correct. The name originated in Wales and the Welsh called the dish "rabbit" facetiously during a meat shortage.

"Armed to the teeth" traces back to the pirates of Captain Kidd's day. A pirate might literally carry a knife between his teeth as well as a weapon in each hand when fighting.



When horses travel on snowy roads, balls of snow often clog their hoofs, hindering them. From this comes the phrase, "all balled up."

Everyone knows that wood, after being cut, must dry adequately before it is ready for use. This is the origin of the expression, "cut and dried," meaning something arranged completely beforehand.

"The bitter end" is a sea term. The cable holding a ship's anchor is fastened on deck to fixtures called



In old Rome, spectators decided the fate of vanquished gladiators. If they turned thumbs down, the winner killed his defeated rival. So today we have the phrase, "thumbs down."

bitts. When the cable is played out to its full length, the ship is said to be at the "bitter end."

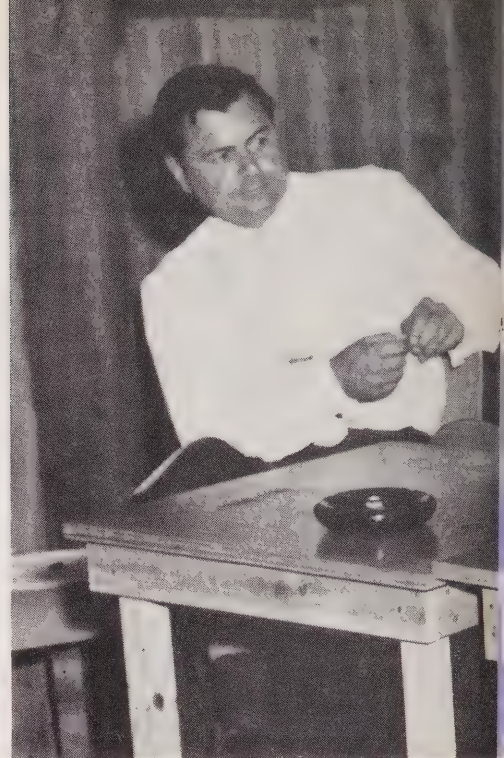
"High and dry" is another nautical expression. Ashore it means deserted or abandoned. To sailors it means a ship so far up on the beach that the tide won't carry it off.

"Pipe down" means "shut up" on shore just as it does at sea. When the phrase originated, it referred to the boatswain's pipe or whistle, which signaled "quiet" at night.

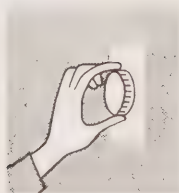
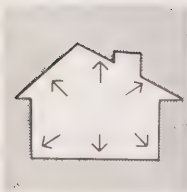
The word, "Levis," came into general use as a synonym for overalls simply because Levi Strauss was a U.S. pioneer overall manufacturer.

"Southpaw" is supposed to have originated in Chicago when the city's chief ball park faced west. A man who pitched left-handed was pitching with his south paw. ■

WHY WE MUST



PROMOTE



RESIDENTIAL customers represent 42 per cent of the total revenue of Ontario's municipal electrical utilities today. In promoting energy sales among these customers, therefore, local utilities should seriously consider instituting active programs to encourage the increased use of such electrical equipment as water heaters, cooking ranges and clothes dryers. Regarded as major "load builders," these three important applications constitute an area where local utilities are experiencing energetic competition from natural gas and other forms of energy.

Delegates at this year's annual convention of the Eastern Ontario Municipal Electric Association heard a probing examination of the situation by a panel of Ontario Hydro representatives consisting of First Vice-Chairman W. Ross Strike, moderator; I. K. Sitzer, assistant general manager—production and sales; D. J. Gordon, director of consumer service, and G. M. McHenry, manager of residential sales.

The panel members covered the subject from every angle, ranging from the reasons for instituting a residential promotion program to the pertinent question of what utilities should promote. Reproduced below is the full text on the discussion dealing with the question of "Why We Must Promote."

1. Question: How important is the residential load to utilities?

Answer: (1) It represents 42 per cent of the total utility revenue and 42 per cent of the kw-hrs sold. (2) The load has demonstrated a uniform rate of growth, with great stability in periods of depressed economic conditions.

2. Question: What uses by residential customers require promotion to meet competition from natural gas? **Answer:** Principally the high energy uses, such as: (1) **Water Heating**—Most important load for natural gas is home heating. The building trade favors it because of lower initial cost of equipment, it's automatic and competitive in operation.



FOUR KEY Ontario Hydro representatives (left to right): Gordon McHenry, manager of residential sales; D. J. Gordon, director of consumer service; First Vice-Chairman W. Ross Strike, moderator, and

I. K. Sitzer, assistant general manager—production and sales, constituted the panel, which recently discussed the need to encourage increased use of electrical appliances by residential customers.

rating costs. But it is a seasonal load, and natural gas companies require another load for 12 months' use. Water heating is a natural supplement, and the next highest source or revenue among the domestic gas appliances. The gas people, therefore, sell water heaters as supplementary load to heating, and it is attractive to customers because of its fast recovery; (2) **Electric Cooking**—While the utilities have, at present, a high saturation of electric ranges, manufacturers have upgraded the gas range, and duplicated many of the electric range features. (3) **Electric Clothes Dryer**—Gas units, while higher in initial cost, are frequently sold with gas water heaters and ranges. There are, however, indications that at an early date gas will also enter the air-conditioning field as they have already done in the U.S.A.

3. **Question:** Why must utilities energetically promote the sale of electrical energy today? **Answer:** (1) Electrical utilities in Ontario have

some \$350,000,000 invested in distribution systems, which, in general, are presently capable of handling the loads that the gas companies seek to capture. The loss of any of these loads, therefore, would mean that the remaining loads would have to bear a correspondingly heavier share of the carrying charges of the existing system; (2) Where new electrical distribution systems must be provided to serve new domestic loads, the cost of a system of minimum capacity is only fractionally lower than the cost of a system capable of serving all types of electrical loads other than house heating. Consequently, it is highly desirable from the electrical utility's standpoint, to serve every possible domestic appliance in order to minimize the share that each must bear of the high cost of new distribution systems; (3) Characteristics of residential loads are such that, other factors being equal, the more kw-hrs used by each customer, the lower the cost of supply per

kw-hr, and thus the lower the rate charged. Since the converse is equally true, the residential uses must be promoted to protect rates.

4. **Question:** But if customers use more appliances, the utility's load is increased, and its cost of power from Ontario Hydro is also increased, can the utility make money and lower its rates while paying more for its power? **Answer:** (1) Yes, the first reason is because of the diversity associated with this load. The patterns of use of the electrical power purchased by the municipalities vary widely. Some of this power is used about 24 hours per day, as for example in an oil refinery, a chemical plant, or for flat-rate water heating. On the other hand, motors in commercial and industrial plants usually operate for limited periods only in every 24 hours. Some loads are used chiefly during the daylight period only, as for example our many one-shift manufacturing plants.

(Continued on page 10)

DURING their visit to the Hydro building at the 1959 C.N.E. in Toronto, this young couple were among the hundreds of visitors who showed keen interest in the electric hot water display. An electric computer told them the proper type and size of heater to ensure a constant hot water supply in their home.



ENCOURAGING SALES of the numerous types of attractively-designed, automatic electric washers and dryers available today, in conjunction with an active water heater program represents an important facet of any municipal electrical utility sales promotion program.

RESIDENTIAL LOAD represents 42 per cent of the municipal utilities' total revenue, and has shown uniform growth for many years.

Lighting loads are for the most part used at night. Some household appliances, (such as the range and dryer) use power in the daytime, while others (such as TV and electric blankets) normally operate at night. In this way, there is built up a very large diversity in the various types of loads supplied by a municipal utility, the connected loads being many times the actual demand placed upon the system. This is particularly true of the residential load. For example, The Detroit-Edison Company, in a load building study a few years ago, estimated that certain additional domestic appliances, with a connected load of 1.7 million kilowatts, would require peak capacity of only 162,000 kilowatts, or less than 10 per cent. This diversity appears in a number of forms. In the first place, there is diversity between the large blocks of domestic, commercial and industrial loads. There is also diversity between appliances on the customers' premises. For example, a group of electric ranges may have individual demands of say 7.5 kilowatts each in the customer's premises, but only 2 kilowatts may appear as the average coincident demand at the transformer, and probably less than one kilowatt as the average coincident demand at the substation. Expressed in another way, the utility's revenues increase faster than the cost of serving. In order to demonstrate this from utility records, a review has been made of the effect of increased customer use on both costs and rates for all utilities in the Southern Ontario System for the past 22 years. The basic material was taken from the operating statements in the Commission's annual reports for the years 1936 and 1958. These figures also show that in 1936 the average use for domestic customers was 150 kw-hrs per month for which the customer paid 1.51¢ per kw-hr. In 1958, the domestic customers used, on the average, 445 kw-hrs per month, but paid only 1.15¢ per kw-hr. Thus, at the



end of a 22-year period, during which the average use per domestic customer increased about 200 per cent from 150 to 445 kw-hrs per month, the cost of supply per kw-hr decreased 30 per cent. However, only 6.5 per cent of this decrease can be attributed to the decrease in the utility's operating expenses, so that the balance of 24.5 per cent is due to the customers' increase in the use of energy. (2) Each municipal electrical utility purchases power in wholesale quantities from Ontario Hydro under a billing method by which the cost to the local utility of an increase in the number of kw-hrs used per kilowatt of demand is very materially less than the new revenue obtained by the local utility from such an increase. For example, let us assume that a utility uses each kw of purchased power 50 per cent of the hours in each month. If these customers use more kw-hrs, increasing their use to 60 per cent of the hours in each month without increasing the utility's demand, the utility's cost of power will increase about \$1.50 per kw per year. Now, if these extra kw-hrs, which cost \$1.50, are sold to residential customers at 1¢ per kw-hr, the utility's revenue will increase \$8.76 per year, resulting in a net gain to the utility of \$8.76—1.50 or 7.26. Thus, the sale of kw-hrs, which have been added without creating peak, become very profitable to the utilities, and it is this factor, which enables them to reduce rates or to maintain existing rates in face of rising costs.

5. **Question:** This theory may be very good, but can you prove from utility experience that the sale of more kw-hrs results in lower rates? **Answer:** Yes, this can be proven in a number of ways, but probably the simplest way is to list all municipalities in groups according to the average residential use of energy, and to calculate the average charge per kw-hr for each group. The following figures are derived from "statement D." of the 1958 annual report:



HUNDREDS of new homes are being built in Ontario today. Will the owners enjoy the convenience of modern electric ovens?

Municipalities with Residential kw-hrs.	No. of Municipalities	Aver. kw-hrs. used per mo.	Average Charge per kw-hr.
Over 600 kw-hrs/mo.	6	650	0.90 cents
From 500 - 599 kw-hrs/mo.	33	556	1.00 cents
From 400 - 499 kw-hrs/mo.	103	447	1.19 cents
From 300 - 399 kw-hrs/mo.	123	341	1.29 cents
From 200 - 299 kw-hrs/mo.	76	247	1.55 cents
Less than 200 kw-hrs/mo.	42	168	2.02 cents

These figures most dramatically indicate that increased kw-hr use is a major factor in lower rates.

6. **Question:** What has been the experience of utilities in Ontario which have had gas competition? **Answer:** The utilities in the Counties of Essex and Kent have had keen competition from low-cost natural gas during a large portion of their 50-year history. Our records indicate that the average kw-hr use of the domestic customers of these utilities is approximately 271 kw-hrs per month as compared with the average for the province of 445 kw-hrs per month.

7. **Question:** What has been the experience of utilities in the United States where natural gas has been more widely available for many years? **Answer:** (1) The U.S.A. is, in many ways, a much more wealthy country than ours, with higher wages and salaries. New electric ap-

pliances are usually available in the United States before they are on the market in Ontario, and at a lower cost. Yet, the average residential kw-hr is only 3,336 kw-hrs per year as compared with 5,340 for the municipal electrical utilities in Ontario.

Much cheaper gas rates than those in Canada, coupled with generally more expensive electrical energy, has limited the rate of growth of residential use in the United States. At the present time, the United States utilities are trying desperately to remedy the situation. Our problem is to hold our present favorable position.

8. **Question:** Have we any definite evidence that gas has made serious inroads in the kw-hrs sold in Ontario and in our revenue? **Answer:**

1) Yes, very definitely so. During the years 1952 and 1955, approxi-

(Continued on page 23)

PRESENTING:

HYDRO

**For 20 years now,
Ontario Hydro films
have successfully
blended education
and entertainment**

By James Foster

1939: Unaware that Canada will enter the Second World War within a few days, happy crowds flock to a tent at the Peterborough Agricultural Fair to see the first sound documentary film shown by Ontario Hydro.

1959: The familiar movie projector stops whirring, the lights click on again, and a sigh goes up from the roomful of teen-agers. Not a sigh over Gregory Peck or Sophia Loren, though. This isn't a neighborhood theatre, but a classroom where audiovisual education aids are helping make schoolwork fun.

Separating these two scenes are 20 years of Ontario Hydro film service, which has provided an audience of some 2½ million viewers with a successful blend of education and entertainment.

Its history began with the Peterborough première of "The Bright Path," an experimental movie showing Ontario Hydro's development from the days of Sir Adam Beck.

Harold Hillier, Hydro's first film equipment technician (and now Sales Service Supervisor in its new Sales Promotion Division), recalls driving from town to town with the film, a screen and projector in the back seat: "In those days we had to supply all the equipment because projectors and screens simply weren't available in the places we visited. As a matter of fact, the audience was often as interested in the projector as in the film."

This was, after all, only 12 years after Al Jolson wowed 'em in "The Jazz Singer," the first movie with dialogue. A sound documentary was a novelty, and, with the help of a 1940 run at the Canadian National Exhibition, "The Bright Path" was a travelling hit that remained in demand for years.

"Even by today's standards it's a darn good movie," says Jack Chisholm, the Toronto cameraman who filmed it. "If it hadn't become outdated, people would still enjoy it."

Seven Movies

Taking this pioneer film's place nowadays are seven sound-and-color movies, 20 and 28 minutes long,

ONTARIO HYDRO NEWS

which have been produced to keep pace with Ontario Hydro's remarkable postwar expansion.

In the classroom we visited, the students had just seen one of these: "The Incredible Cataract."

"A man who has never looked on Niagara has but a faint idea of a cataract," wrote essayist Thomas Macaulay. And what amount of written or spoken description could match color photography in capturing the grandeur of the Niagara River and the Falls? Spectacle after scenic spectacle in "The Incredible Cataract" accompany a lesson on the effects of erosion and the work of Hydro and the U.S. Corps of Engineers to preserve the beauty of Niagara Falls.

So the students are happy — they've seen a good show. And their teacher is happy — research has indicated they'll remember more from the 20-minute color movie than they would have from a lecture.

Along with the film, the teacher borrowed a film kit service, which was introduced in 1951 for grades 8, 9, 10 and 11. Included were suggestions for his own introductory remarks, a questionnaire on points covered in the movie, suggested essay topics and material to help pupils follow up what they learned.

Tour Projects

Many teachers also supplement the films with actual conducted tours of projects.

But Ontario Hydro has many more films, which it makes available to any school, church group, service club or other organization:

- "Niagara the Powerful," an easily understood explanation of the way electricity is generated, transmitted, distributed and used.
- "The Powerful Horseshoe," which takes the viewer step by step through the planning and early construction stages of Sir Adam Beck-Niagara Generating Station No. 2 at Queenston.
- "Power from the Ottawa," the story of the majestic Ottawa River and the part it has played in the development of Ontario's hydro-electric resources.

- "A Gift of Nature," tracing the history of Ontario Hydro, the work that went into harnessing falling water to generate power, its vast postwar expansion program, and the leading role Hydro has played in testing and development in the field of nuclear-electric generation.

- "History, Beauty and Power," which recalls the Niagara Peninsula's historic past, takes the audience through beautiful Victoria Gardens and describes in detail work on the second Beck station.

- "From Dream to Reality," the story of the St. Lawrence Power Development. Another film on this year's visit to the St. Lawrence by Queen Elizabeth and Prince Philip is now ready.

For specialized groups there are also films dealing with work on live transmission lines, electronic data processing and the engineering problems of the Sir Adam Beck-Niagara Generating Station No. 2.

Other films are planned to show the construction and operation of a thermal plant, the benefits of Ontario Hydro's rural electrification program and farm applications of electricity.

Growing Popularity

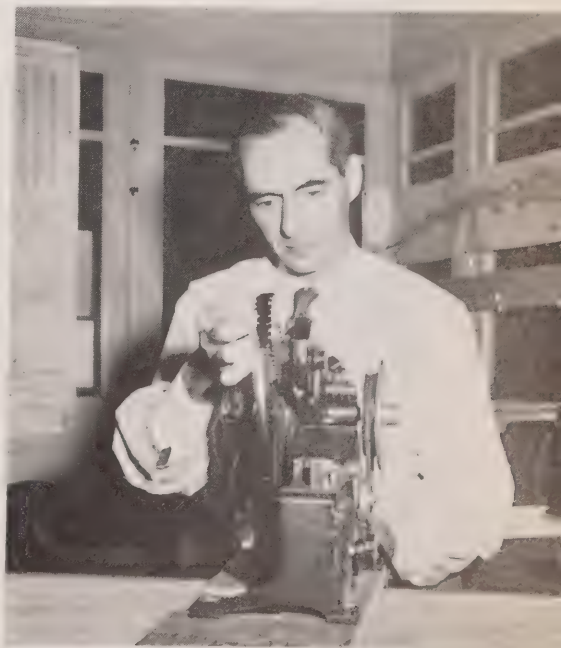
Both as a cause and effect of the production and distribution of such films throughout the province, their popularity is growing by leaps and bounds. Last year alone, 271,558 people attended 7,757 showings — twice as many screenings as Hydro arranged in 1956. Naturally, copies must be made to keep up with this sort of demand, and there are enough prints available to run simultaneously in every theatre in Toronto.

They're telling the Hydro story abroad, too, as well as in Ontario. Sometimes the actual prints travel to other countries with foreign visitors who were impressed by them here. Films have been shown in this way in such countries as England, the United States, South Africa, Scotland, Australia, New Zealand, Japan, India and Ceylon. In 1955, three showings attracted

(Continued on page 14)



CAMERAMAN Burt Helling records progress in building an addition to the Richard L. Hearn Station on Toronto's waterfront.



AT HYDRO'S Head Office, film is edited under the direction of Supervisor Alex Camp.



WITH THE AID of a viewer, the film editor, Elena Gerngross, selects footage for a new film in consultation with Mr. Camp.



WHEN THE FINISHED MOVIE, with its synchronized sound track is ready, Norman Neill, film equipment technician, takes over.

11,642 viewers during the Boy Scout World Jamboree at Niagara-on-the-Lake, and many Scouts from other countries took their impressions home.

Production and distribution of the movies are separate operations of Hydro's Information Division at Head Office in Toronto.

Since December, 1952, production has been directed by Alex Camp of the Division's Graphic Department, whose 20-odd years in the film business include work in England, India and Canada, in technicolor laboratories, as well as in the various production phases of feature and documentary movie-making.

Working with him are Elena Gerngross, film editor, who came to Ontario Hydro this year with a background of movie and TV experience in Italy and Canada, and veteran cameramen Burt Helling and Cam Warne.

Much of the team's "on location" work involves recording progress at Hydro construction sites. This film is edited into specialized technical

movies, and some of the footage is fitted into the films for public distribution. Many of the scenes, however, are shot to meet the specific requirements of master scripts. The Motion Picture Section then records and fits narration, music and natural sound effects into a composite sound track which is synchronized with the film.

The finished film and prints of it are distributed to the public through Norman Neill, a camera enthusiast with 10 years' experience at Hydro, who became film equipment technician with the Information Division's Services Dept. in January, 1958.

Besides addressing groups and presenting films personally, Neill is busy arranging distribution of films to organizations and clubs which handle their own showings. In addition, Hydro's film technician is responsible for assembling sets of appropriate color slides to accompany illustrated addresses by Ontario Hydro engineers and other representatives. Apart from the movies for general

distribution, his library is stacked with reels for use within the Commission: movies on technical matters, safety instruction and information of general interest to employees.

When he isn't handling traffic in and out of the library, Mr. Neill is taking care of equipment and repairing films that come back spliced with cellulose tape or nail polish, and sometime re-wound backwards on the reel. He considers this one of his most important jobs, because a film that isn't in perfect condition could spoil the next screening.

Any requests addressed to Hydro's Services Department are answered promptly with only two stipulations: the group borrowing the film must have a 16-millimetre projector and show the movie without charging for admission. If an organization asks a Hydro representative to attend, this will be arranged when possible. In such cases, the information officer addresses the audience, presents the film and answers questions — and sometimes they're real posers! ■



PORTABLE POWER — On the Kara-Kum Canal in the Soviet Republic of Turkmenia, a floating power station is being towed to a generating plant construction site. The canal runs through the arid Kara-Kum desert, which takes up 90 per cent of the low-lying plain of Turkmenia, the lowest and driest of Central Asiatic republics situated east of the Caspian Sea.



TEA UP — High tea in the parlor on Sundays was never as high as the cup of tea being enjoyed by this lineman employed by Britain's Central Electricity Generating Board. He was as entitled as any other workman to his five-minute break, but at 150 feet above the Essex countryside, how was he to get his "cuppa?" Two mates on the ground brewed up, and the welcome tea—in a flask—whisked aloft in a bucket by rope and pulley. For once the phrase "tea up" was literally true.

IN BRIGHTER AFRICA — A striking night view is provided by the great Kariba power dam on the Zambesi River in Rhodesia, Africa, with its floodlit faces and the single jet of water, which is all that is left of the Zambesi. The dam will ultimately reach a height of 416 feet, being 80 feet thick at the base. The completed hydro-electric project, which will have an ultimate installed capacity of 1.2 million kilowatts, is expected to make a dynamic contribution to the economy of the Federation of Rhodesia and Nyasaland.



THUNDER BAY TAKES SHAPE

THE HUGE steel skeleton of Ontario Hydro's first thermal-electric electric plant in Northern Ontario is taking shape on a 157-acre waterfront site near Fort William.

Although the start on Thunder Bay Generating Station's framework was delayed slightly by the U.S. steel strike, 20 per cent of the required 2,500 tons of steel has been erected and foundation work is past the half-way mark.

Three hundred men are working at the site on Island No. 2, and the labor force is expected to exceed 500 in the peak construction period. A road and railway spur line over a bridge to the island provide access to the site.

An important factor in selecting this location was the Canadian Government's nearby turning basin on the Mission River, which serves grain elevators and other docking facilities on the opposite bank.

The station, to be built at an estimated cost of \$26,000,000, will ensure that soaring power demands in Northwestern Ontario are met even when water levels are low. It is scheduled for service in 1961 with an initial capacity of 100,000 kilowatts, while provision has been made for expansion up to 1,000,000 kilowatts in future as required.

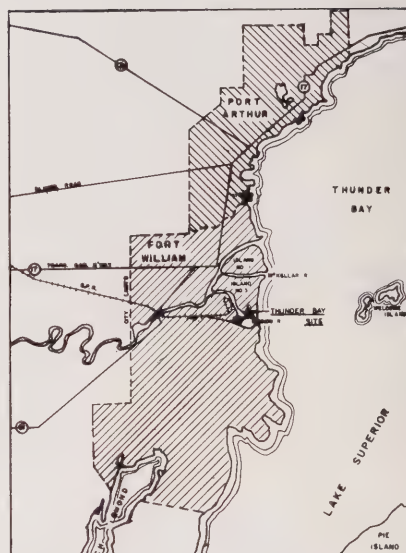
For example, the completed 700-foot long dock can be doubled to 1,400 feet if the plant's capacity exceeds 500,000 kilowatts. Ships will be unloaded by two crawler cranes, each capable of handling 250 tons of coal an hour. If necessary, unloading, conveying and crushing capacity can be expanded to deal with ships weighing up to 22,000 tons gross at a rate of 2,000 tons an hour. Storage will be available for 2,000,000 tons of coal.

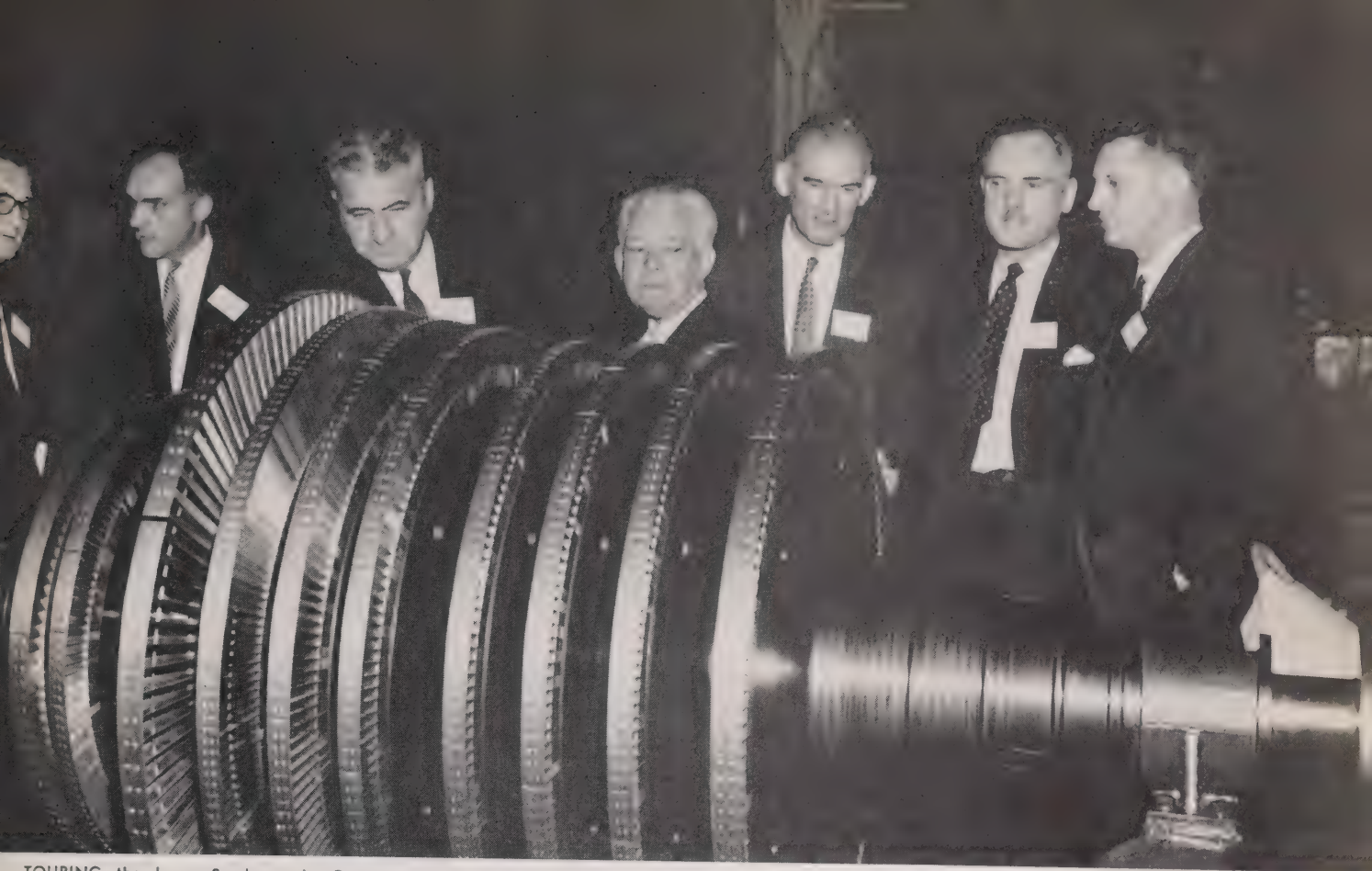
Work is about half complete on the intake channel, which will supply Unit No. 1 with 76,800 gallons of cooling water a minute from the Mission River.

The water will be pumped through the main condenser, then through outlets beneath the turbine and boiler rooms to an open cut discharge channel emptying into Thunder Bay. This channel is almost finished, while dredging of the docking area to a Seaway depth of 27 feet is now in progress.

The powerhouse initially will be 360 feet wide, 139 feet long and 136 feet high. Depending on the size of future units, it could ultimately be extended to a maximum length of 820 feet. Its 350-foot chimney will also serve the station's second unit if, as anticipated, it also has a 100,000-kilowatt capacity.

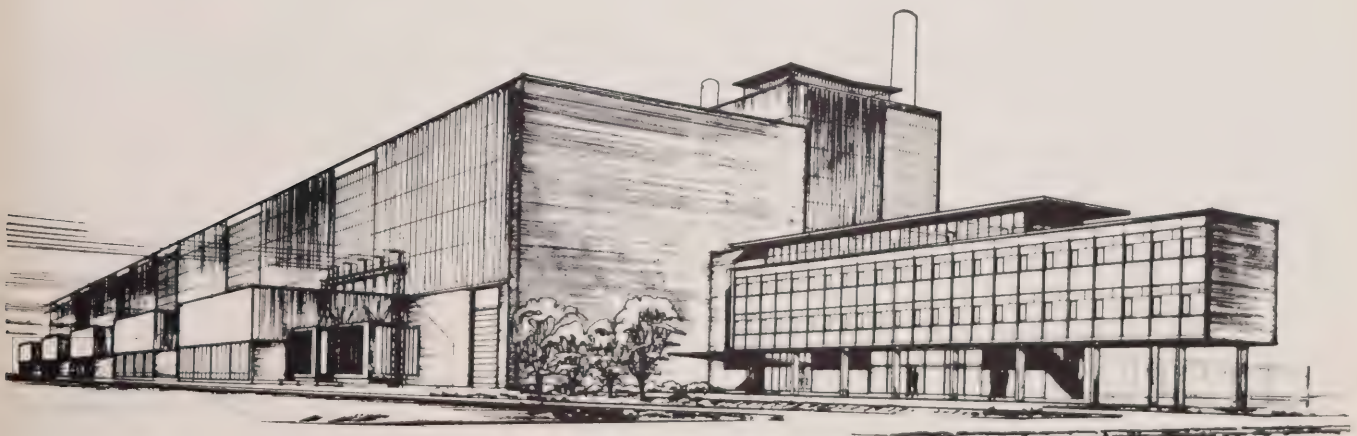
To reduce air pollution to the minimum, a high-efficiency mechanical and electrostatic dust removal system will be installed. ■





TOURING the large Scarborough, Ont. plant of John Inglis Co. Limited recently, a party of Ontario Hydro representatives and Ontario business leaders saw work under way on the first large, Canadian-built steam turbo-generator, which will be installed in the new Thunder Bay thermal-electric plant. Here a group of visitors,

including (left to right): H. S. Dennis, Ontario Hydro's thermal generation engineer; the Commission's Assistant General Manager—Engineering, H. A. Smith, and Assistant Director of Engineering, H. P. Cadario; John MacVicar, Inglis works manager; Dr. K. F. Tupper, Kenneth Leeming and Charles Hodgson examine a section of a rotor.



COMPANIED by Construction Manager J. H. (left), Ontario Hydro Chairman James, Hon. Robert Macaulay, second vice-, and Premier Leslie M. Frost recently building progress at the new project.

ARCHITECT'S SKETCH of the new Thunder Bay station, which is scheduled for service in 1961 at an initial cost of \$26 million. Location of the new plant is designed to ensure maximum service security for Ontario Hydro customers in the 98,000-square-mile Northwestern Division.

A First for Etobicoke

Progressive suburban utility sponsors National Home Week inspection of attractive, all-electric dwelling

AN ATTRACTIVE, four-level dwelling in a picturesque wooded area overlooking the west branch of the Humber River has brought new distinction to progressive, expanding Etobicoke Township.

Opened for public inspection during the recent observance of National Home Week, the modern new residence of Nicholas Durbano, president of Dorban Homes Construction Company, won the honor of being Metropolitan Toronto's first Gold Medallion, electrically-heated home.

Erected with solid masonry walls to meet the strict standards of the Toronto area building codes, the Durbano home also gracefully combines solid brick and cedar V-joint siding in its exterior finish.

Many recreational features have been incorporated in the design, such as an enclosed 28 x 14-foot swimming pool, accessible from an exterior patio and also from the interior. And the water for the pool is heated electrically!

The connecting doorway permits access to the family and TV room, with its semi-circular bar, as well as to an adjoining den and a washroom on the second-floor level. Heat for the swimming pool area, the family room and a large but cozy, wood-panelled recreation room on the first level is provided by inconspicuous built-in baseboard type electric heaters. An added touch is

a floor-to-ceiling stone fireplace in the recreation room, which also boasts numerous electrical outlets and several interesting lighting features.

Offering a panoramic view of the Humber Valley, is the living room with its cathedral ceiling, another imposing fireplace and double glazed picture windows. Effective lighting complements the charm of this unusual room, while built-in electric units, virtually hidden under the baseboard, ensure steady heat. This type of heating unit is used in other main rooms, including the family-sized dining room.

Adjacent to the dining room, the kitchen is a virtual showplace for a galaxy of electrical appliances and

equipment, such as a built-in wall oven and rotisserie, separate surface cooking elements, electric refrigerator, and a portable electric dishwasher. Even a four-speed electrically-operated exhaust fan has been installed above the cooking area.

There'll be no washing drudgery in the Durbano's nearby laundry room either, for it's equipped with electric washer, dryer and a Hydro automatic water heater.

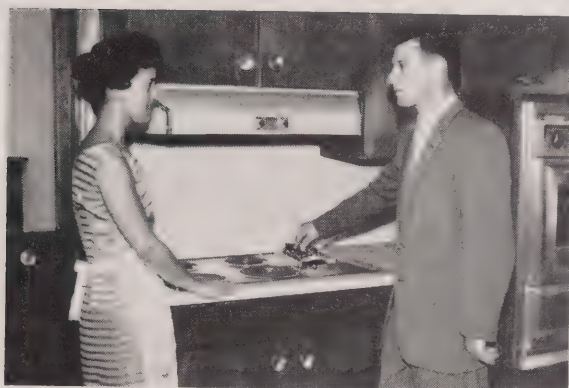
Built-in baseboard radiant heaters have been installed in the master bedroom, two other large bedrooms and a four-piece main bathroom on the home's fourth level. But in the master bedroom's washroom, there is a unique heating feature built into



Exterior view of Etobicoke Township's first Gold Medallion, electrically-heated home.



DURING a National Home Week inspection arranged by Etobicoke Hydro, the builder and owner, Nick Durbano (left), indicates to Ontario Hydro Chairman James S. Duncan and Etobicoke Chairman Dr. V. S. Wilson that his home has ample "housepower."



IN THE KITCHEN, Mrs. Durbano and Harold LeMoine, Etobicoke Hydro, discuss controls on the surface cooking elements.



MR. DURBANO checks on the operation of the air-conditioner installed in the fourth level master bedroom.

the ceiling light fixture, which offers combinations of light, heat and ventilation — smoothly and conveniently controlled by a wall switch.

Public Inspection

These new concepts of modern, electrical living were examined with special interest by a group of Metro Toronto builders and utility executives during a special showing arranged by Etobicoke H.E.C. on September 30.

Representing Ontario Hydro, Chairman James S. Duncan spoke briefly during which he confidently predicted a coming "tidal wave of interest in electric home heating."

Even though promotion of this

relatively new application of electricity was begun little more than a year ago, approximately 300 homes, either completed or under construction in Ontario are being built for electric heating. In addition, some 2,200 enquiries, related to various aspects of electric heating, have been received by Ontario Hydro.

"Ontario Hydro intends to take full advantage of this public interest by launching an intensive campaign to promote and encourage electric home heating among existing and potential Hydro customers," he stated.

Indicating the possibilities of developing this field in Ontario, Mr. Duncan cited the growing popular-

ity of electric heating in the United States.

"Last year there was an estimated 100,000 electrically-heated homes in the United States, and there is confidence among the electrical utilities of that country that some 8 million homes will be heated electrically by 1978," the speaker declared. "At the present time, there are some 2,800 electrically-heated homes in our neighboring Province of Quebec."

In emphasizing the need for a hard-hitting and sustained promotional program embracing all levels of the industry, Mr. Duncan said: "The demand for electric energy in Ontario must keep on increasing if

Continued on page 20

we are to continue to supply power at rates which are among the lowest in the world." It is with this object in view that Ontario Hydro and the associated municipal electrical utilities are sponsoring the diversified "Live Better Electrically" campaign.

Following the tour of the Gold Medallion home, the visitors were guests of Etobicoke Hydro at a dinner meeting where all aspects of electric home heating were explored.

A word of caution was introduced by Dr. V. S. Wilson, Etobicoke Hydro Chairman, who warned that a single poor installation could nullify the favorable reaction engendered by 500 good ones.

Dr. Wilson also drew attention to the new Etobicoke Hydro service building now being erected on Kipling Avenue. He said it would contain the first commercial air-to-air heat pump installation in Ontario.

Gaining Ground in Ontario

Introduced by Reeve H. O. Waffle, of Etobicoke, as "an expert who can speak with authority on the subject of electric home heating," Gordon McHenry, Ontario Hydro's manager of residential sales, predicted that there would be at least 200,000 electrically-heated homes in Ontario by 1978. Explaining the relatively new status of this type of heating in Ontario, he said that "Ontario Hydro has been under pressure for years to establish a rate for electric heating in homes and commercial buildings. The advisability of this was reviewed from time to time, but action was delayed until it was certain that this is a desirable way to heat buildings."

He pointed out that many people are willing and anxious to pay the small additional operating costs in order to enjoy the greater comfort, reliable performance, safety and convenience that electric heating affords. These advantages and the reduced building costs that can be effected with electric heating in a properly-insulated home more than offset the slightly higher energy costs. ■

GOLD MEDALLION AWARD is presented to Leamington's Manager J. F. Anderson by Hill Slean, Electric Service League of Ontario representative (right). Witnessing the presentation on the steps of Mr. Anderson's new home were (left to right): Leamington Chairman W. S. Otton, Commissioner C. W. Howden and Gordon McHenry, residential sales manager of Hydro's Sales Promotion Division.



LEAMINGTON MANAGER PRACTICES WHAT HE PREACHES

PUSH-BUTTON living shifted from the future to the present in the recently-completed, all-electric home (shown below) of Jack Anderson, manager of Leamington P.U.C.

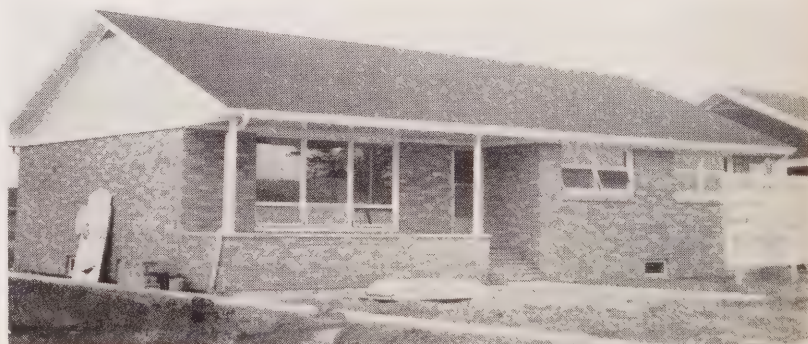
Formerly a consumer service supervisor in Hydro's Western Region, Mr. Anderson is well aware of the advantages of electrical living. Thus, his new home has everything from electric heating to an electric can-opener.

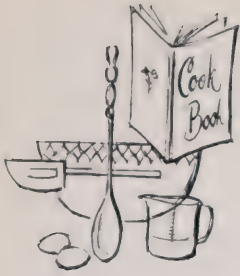
Individual temperature control units are located in every room, including the bathroom off the master bedroom. The ranch-style home uses baseboard convector heating units, supplemented by glass panel radiant heaters at the back door and in the laundry room.

A special 100-ampere service has been installed for the electric heating load. Another 100-ampere service panel assures safe, efficient operation of present electrical appliances and allows for additional circuits in the future. Bookcases on the ground floor take up the space ordinarily required for the chimney, unnecessary with electric heating.

The kitchen incorporates special lighting units over the work areas. Table-top elements and an electric wall oven, equipped with automatic controls, are feature appliances in the kitchen area. The mahogany-trimmed living room has fluorescent cornice lighting, which can be dimmed in graduated intensities by a wall switch.

More than 3,000 persons visited Leamington's first all-electric home when it was opened for public inspection. Among the visitors was Ontario Hydro Chairman James S. Duncan, while a number of public utility officials from other Essex County communities also inspected the new home. ■





LET'S CHAT

with Lois Hurst of Ontario Hydro's Homemaker's Service



MEDALLION Homes are making news around Ontario. Many of you undoubtedly read with interest the 31-page Medallion Home feature in a September issue of *Life*. Hundreds of people saw the Gold Medallion model home which was part of Ontario Hydro's display at the 1959 Canadian National Exhibition. It was well worth a visit even if you

ditioner, an automatic clothes washer and matching dryer, an electric water heater and a fabulous home workshop. In addition, a combination washer-dryer was built into the bathroom, a luxury we admit, but oh! so handy for sheets, towels, underwear and diapers.

Of course our home was heated electrically, the ultimate in home

write Ontario Hydro Homemakers' Service, 620 University Avenue, Toronto 2.

Pictured here, in a corner of our kitchen, Mrs. Nancy Murphy is about to put some Shishkebabs into the wall oven. The very word "Shishkebab" sounds exotic. Developed in Armenia, it is truly a delicious way to cook lamb. Fashionable restaurants feature these morsels served flaming on a sword, but we like them better by the following method. It is safer, cleaner and tastier.

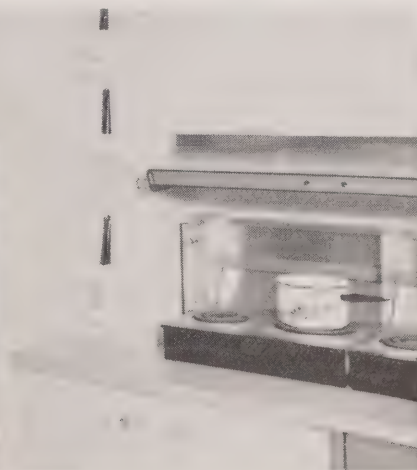
SHISHKEBABS

Marinate two pounds of lamb (from leg), cut into 1½ inch cubes, for at least 2 hours or preferably overnight. A basic marinade for lamb is made of 1 cup each of salad oil and red wine or pineapple juice, 10 peppercorns, 1 bay leaf, chopped mint leaves, paprika and ½ teaspoon salt.

Skewer cubes of lamb alternately with pieces of green pepper, small whole precooked onions, mushroom caps and chunks of firm tomato. Allow two skewersful for each person.

Brush with marinade and sprinkle with salt. Broil on kebab attachment as shown in the picture or set the skewers on the broiler pan and turn several times while cooking. Baste from time to time with marinade. Broil until meat is just cooked through.

Serve piping hot with steaming white rice and minted green peas. What a colorful dish this makes and good eating too! ■



were foot-sore and weary after a day at the Ex.

Our all-electric Gold Medallion Home glowed like a jewel with skillfully designed lighting for easy, comfortable seeing.

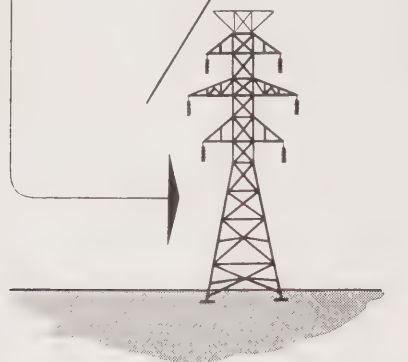
Housekeeping is so much simpler nowadays with modern electric appliances. Gold Medallion standards require that at least five major appliances be installed and that circuits be provided for a least five more. Our display home had a built-in wall oven and tilt-back counter top elements, a refrigerator-freezer, a dishwasher, ventilating fans in both kitchen and bathroom, an air con-

heating comfort. Unobtrusive, silent baseboard and wall type heaters in each room were controlled by attractive wall thermostats.

The unseen heart of our home was its electrical system. Circuits and wiring conformed to Red Seal standards. To allow ample "housepower" one service panel made provision for 20 circuits and 100 amperes, and a second panel, also 100 amperes, cared for home heating. Indeed our house was well designed with capacity for both present and future needs.

If you would like a pamphlet on Medallion Home standards just

ALONG HYDRO LINES



Institute removal charge for fallen TV aerials

Television aerials which fall on electric lines will cost Toronto householders a minimum \$10 removal fee in the future. Previously, the Toronto Hydro-Electric System charged only when Hydro equipment was damaged.

Increased numbers of fallen aerials this year led to initiation of the new policy. Officials said old, weak wire supports were the main cause of the accidents.

In the first three months of this year, the number of calls for aerial removal—more than 150—equalled the total for all of 1958. On March 16, during the last violent wind-storm, Hydro repair crews answered 68 calls.

Owen Sound P.U.C. purchases building

Owen Sound P.U.C. has purchased an Ontario Department of Highways office.

The utility plans to rent the 32-by-52-foot, one-storey brick building initially, and later adapt it for demonstration and display of electrical equipment or for new offices.

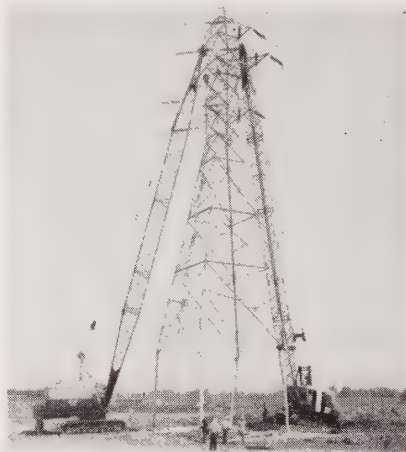
UPSADAISY!

PEOPLE driving along the Queen Elizabeth Way, west of Hamilton were startled to see a 10½-ton transmission tower, high-voltage lines and all, making like a helicopter until it dangled 20 feet off the ground.

They were watching a fast, ingenious operation by Ontario Hydro's West Central Region crews to extend the 106-foot tower and provide clearance for a new interchange.

It was a particularly delicate job because the lines, at this point, were on a 30-degree angle at the tower. Although they were disconnected, the lines had to be ready for service almost immediately if required.

Two cranes positioned the tips of their 100-foot booms slightly higher than the tower and hauled it aloft



by slings attached lower down on the structure.

Before the big stretch, the arms were braced to protect the insulators and guy wires were attached to keep the uprooted tower from swinging sideways. Two of these cables led to winches on tractors 400 feet away. As the cranes pulled up two feet at a time, the hoists and winches were gradually slackened off.

In 25 minutes the 20-foot lift was completed. The corner pieces of the extensions had been tied to the tower legs so they were dragged up as well. When the extension was fitted, tower No. 49A was 20 feet taller.

Thus a working force of 18 men finished a slick job of "hoisting a fast one." ■

Society beautifies utility substations

Preston Horticultural Society and Preston P.U.C. have joined forces to beautify their town.

The design of two substations conforms with the architecture of surrounding homes. Only a wire



fence enclosing the rear of the premises, as a safety factor, distinguishes the substations.

The society drew up plans, selected and supervised planting and the commission paid the costs.

Sarnia plans added office space

Large-scale improvements and renovations approved recently for the second floor of Sarnia Hydro-Electric Commission offices will provide additional office space for all departments, including the promotion department.

A new feature in the accounting department will be a soundproofed barrier for the electric accounting machine. In conjunction with the province-wide campaign to promote domestic and commercial electric heating, Sarnia Hydro will heat part of the second floor by electricity, in addition. The rest of the building will be heated by the present steam-heating system.

Cobourgh awards substation contract

Cobourgh P.U.C. has awarded a \$44,523 contract for construction of a new substation. Lowest of 21 tenders submitted, the price includes construction costs and a new 5,000-kva transformer.

WHY WE MUST PROMOTE

(Continued from page 11)

mately 30,000 flat-rate water heater units were added per year. This figure has gradually decreased until, in 1958, there were only 14,600 units added. The figure for 1958 is all the more serious when it is realized that the number of housing units completed, doubled between 1952 and 1958.

9. Question: What does this lost business cost us in revenue? **Answer:**

(1) For every 10,000 Hydro water heaters installed, the revenue is approximately \$400,000 a year. If these water heaters are lost to competing forms of energy, then the loss in revenue would amount to \$22 million in a 10-year period. Stated in another way, the electrical utilities in Ontario, based on 50,000 new homes per year, have a potential new revenue each year from water heating valued at \$2 million. At the end of 10 years, this potential new revenue will have accumulated to the fantastic sum of \$110 million. These figures indicate the reasons that the natural gas people are placing such great emphasis on the water-heating load. Also let us face the fact that the type of water-heating unit initially installed will, in all probability, remain in the home at least for the life of the unit. (2) Omitting flat-rate water heaters, our statistics reveal that the average annual **rate of increase** in residential kw-hr use of 170 kw-hrs for the period 1950 to 1957 decreased to 75 kw-hrs in 1958. Including flat-rate water heaters, the annual increase for the period 1950 to 1957 averaged 237 kw-hrs and decreased to 24 kw-hrs in 1958. On the other hand, in the U.S.A., the average rate of increase of some 200 kw-hrs per annum was maintained, while B.C. Power Commission reports that, on its system, this increase was 350 kw-hrs in 1958. This unsatisfactory record in Ontario for 1958 must not be permitted to continue.

(The next issue will provide answers to the problem, "How Do We Promote?") ■



A St. Lawrence Seaway cruise sponsored by the Toronto Board of Trade brought more than 200 people to Hydro's Robert H. Saunders-St. Lawrence Generating Station. Pictured during a tour of the station are (left to right) James A. Blay, Hydro's director of information; W. E. Williams, president, Proctor & Gamble Co. of Canada Ltd.; G. Allan Burton, vice-president, The Robert Simpson Co. Ltd.; James W. Wakelin, general manager, Toronto Board of Trade, and H. J. Sissons, Hydro's assistant general manager—services.

Brampton announces expansion program

Future plans of Brampton Hydro-Electric Commission include expenditures for purchase of property, water heaters for rental purposes, utility equipment and extensions and improvements to the electrical distribution and street lighting systems. The expansion program will be financed from available funds, from funds estimated to become available and from the proceeds of a debenture issue.

Kingston changes delinquents' rules

As a means of exercising better control over delinquent accounts, Kingston P.U.C. has rescinded the privilege of paying gross bills at five collection offices. Henceforth, customers who fail to pay accounts before expiration of the discount period will be required to visit the utility offices to make payments. A small percentage of Kingston customers (1-2 per cent) will be affected by this ruling, officials estimate.



PRIZE-WINNING FLOAT in the local Labor Day Parade was a flower-covered truck based on the nursery rhyme, "Mary, Mary quite contrary" entered by St. Thomas P.U.C. Lorne MacVicar, Hydro superintendent, and Allan Littlejohn, waterworks superintendent, received congratulations on the design of the float, which placed first in the non-union class. Adding to the success of the parade were three other utility vehicles featuring the "Live Better Electrically" theme.

Schools join trend to electric heating

Tillsonburg became the first Ontario municipality to boast an electrically-heated school when the new Westmount School for Retarded Children, sponsored by the local Rotary Club, was officially opened earlier this year. Two other school buildings were completed at Bowmanville and Walkerton by the time bells rang to call pupils back from their 1959 summer vacations.

Impressive first-cost savings were effected in both the Westmount

School and the Lord Elgin Public School at Bowmanville. Electric heating units eliminated the need for such extra facilities as chimneys, boiler rooms, boilers, pipes and ducts associated with conventional heating systems, and also made it unnecessary to employ the usual operating and maintenance staff required.

As the existing heating system was not large enough to serve a six-room addition, electric heating units were installed in each of the new classrooms at Walkerton District High School.

Wins Canadian Legion oratorical contest

Douglas Hayman, North Bay, and the St. Lawrence Seaway and Power developments proved to be a winning combination in the Canadian Legion's province-wide 1959 public speaking contest.

His choice of topic was a logical one, since his father is A. B. Hayman, consumer service engineer in Hydro's Northeastern Region.

Winner in eight different contests, Douglas won the provincial title and cup in the elementary



EXTERIOR VIEW OF ROTARY WESTMOUNT SCHOOL AT TILLSONBURG

Plan electric heating for new area offices

Plans for construction of new area offices at Cobourg and Dundas have been announced by Ontario Hydro. They will be two of the first Hydro area offices to be heated electrically.

Cost of the Cobourg building, which will serve close to 5,000 customers in the surrounding district, is estimated at \$38,000. It is scheduled for completion early in 1960.

The new structure at Dundas replaces the present building, now too small to meet requirements, and is expected to be ready for occupancy by the end of the present year.

Generating stations of Ontario Hydro, where surplus power is normally available, customarily have been heated electrically. In future, all new Commission regional and area offices will be heated in this way.

Georgetown Hydro plans for the future

Construction of a 5,000-kva bungalow-type substation will be a major item on the 1959-60 agenda of Georgetown Hydro-Electric Commission. The utility's plans also include purchase of water heaters for rental purposes, as well as new utility equipment, in addition to extensions and improvements to the electrical distribution and street lighting systems. The entire program, estimates indicate, will entail an expenditure of \$131,600.

Etobicoke building new service centre

Construction has started on a new service centre for Etobicoke Hydro-Electric Commission. Scheduled for completion next spring, the new building is designed mainly as a stores and garage depot for heavy line construction forces, with a floor area of 60,000 square feet. Facilities are also being provided for a meter shop and a system control room.



DOUGLAS HAYMAN

school division, as well as a prize of \$25. He made his first speech in his Grade VI classroom at King George Public School and went from there to city-wide and area contests. The next three contests determined winners in the zone, district and regional semi-finals at Callander, Elliot Lake and Timmins respectively. In the finals at Kitchener, Douglas distinguished himself by competing against four other contenders in his class and emerging as champion.

Only two of Canada's ten provinces do not border on salt water.

—Quick Canadian Facts

ONTARIO HYDRO NEWS



better for **NEW** cooks, too!

New cooks are off to a good start with an automatic electric range! No burned food or boil-overs for them, because timers and temperature controls help them cook just the way Mother does . . . to perfection every time! And electric cooking is faster, cleaner, cooler, too! You get more out of life when you get the most out of electricity!

live better...ELECTRICALLY
the safe, clean, modern way!

(Sample advertisement—mats available to the associated municipal utilities
for use in local "Live Better Electrically" campaigns.)



ONTARIO HYDRO NEWS



DECEMBER 1959



Christmas Greeting

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JAMES A. BLAY

BOYD L. GRAHAM

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AMIDST the rush of Christmas preparations, it is heartening to see men and women pause to exchange the "Compliments of the Season."

There are those who deplore the atmosphere of commercialism that this season sometimes engenders, and perhaps their observations are not without some justification. But is it not true, also, that Christmas generates a spirit of resolution to discard petty jealousies and animosities and of re-dedication to the tasks and obligations that are the lot of each person?

It is fortunate that the Christmas season lays emphasis on such lofty ideals, for there never was a period in man's history when personal discipline and persevering energy were more important and necessary.

Today, we live in an era of supersonic aircraft, of nuclear warheads and space satellites. Science is taking great strides forward, too, in many fields that serve and benefit mankind. But always behind these outstanding advances, we find men with bold, inventive minds, men who take pride and satisfaction in making new discoveries and in rolling back the frontiers of human knowledge.

In Canada we have seen the fruitful results of unremitting struggle and courageous, imaginative action as this nation has moved steadily forward from a vast forest wilderness to a position of eminence in industry and commerce, in science and in



D. P. CLIFF
Commissioner



LT.-COL. A. A. KENNEDY
Commissioner



A. W. MANBY
General Manager



DR. OTTO HOLDEN
Chief Engineer



many other fields of human enterprise.

We are the heirs of those who recognized the great potential of Canada. Today, too, we enjoy a rich legacy created by individual and co-operative endeavor in the field of public service.

We are particularly mindful, at this moment, of the privilege that has been ours, as members of the Hydro family, of serving the people of Ontario, and contributing to the building and expansion of our Province. We welcome this opportunity of paying a special tribute to the countless men and women, who have labored unceasingly on behalf of their communities as representatives of the associated municipal electrical utilities.

In the months that lie ahead, we will face many new challenges — challenges that will afford even greater opportunities for service to the people of Ontario. But we are confident that the spirit of devotion to our individual responsibilities will carry us forward to the attainment of new objectives in 1960.

In this spirit of optimism, we take pleasure in sending to all associated with Hydro across the Province, our sincere Christmas greetings and the warmest wishes for a Happy and Prosperous New Year.

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CARTIER'S CHRISTMAS



AN OUTBREAK OF SCURVY almost ruined the Christmas celebrations of Jacques Cartier and his Breton crew while wintering at Stadacona (Quebec City) in 1535-1536. A medicine, made from hemlock or spruce, saved many lives.



THE evergreens stood tall along the shore and back of them, their branches barely outlined against the sky, the oaks and maples beckoned the explorers into the mysterious, unknown land of Donnacona, now called Canada.

It was Christmas Night, 1535, and the explorers were Jacques Cartier's men, wintering for the first time at Stadacona (Quebec City).

In his famous "Voyages," Cartier records that it was bitterly cold that winter, with snow four feet deep outside and ice of four "finger-breadths" in thickness below decks in his three little ships.

Scurvy had broken out, and, but for a miracle, Cartier might never have seen France again. It happened that on his first voyage the previous year (when he did not stay the winter) he had taken two Indians to France. He brought these Indians back home on this second voyage and one of them, Dom Agaya, was able to tell him how to cure scurvy with a tea made of evergreen needles.

Yet the scurvy did not deter Cartier and his Breton crew from a good Christmas. Because they were Breton men, their sort of Christmas included the Yule log ceremony.

An oak was the "Yule log" in this traditional observance. The master of the household spilled wine three times upon it and then exhorted it to rekindle the Christmas fire — symbolic of Christmas hope. Then the Yule log was burned amid prayers and hymns, followed by general merriment.

Aside from the Christmas observances of early settlers in Newfoundland, Cartier's may well have been Canada's first Christmas, and it is certainly the first one we know anything about.

On this voyage, when the Captain was 44 years old, he named the Gulf of St. Lawrence and discovered and named Mount Royal.

Another famous early Canadian Christmas was that of Jens Munk, the head of a Danish expedition

(Photos from C. W. Jeffreys Imperial Oil collection).

ONTARIO HYDRO NEWS

that landed on the shores of Hudson's Bay (where Fort Churchill now stands) and wintered there in 1619.

This expedition of 65 men was also stricken with scurvy, and they, too, did not let the fact hamper their Christmas celebration. Munk records that on Christmas Eve they drank wine and beer and had a gay time. On Christmas Day there was a sermon and Mass, then each gave to the priest according to his means. The poor ones gave the skins of white foxes, trapped along the coast. Then all enjoyed games and general merriment. But Munk's expedition ended in disaster. Lacking any cure, scurvy killed all but three men before winter released the ships.

Order of Good Cheer

An earlier and happier Christmas was spent by Samuel de Champlain at Port Royal, Nova Scotia, in 1606. He had established the famous

Order of Good Cheer to raise his men's spirits. Every day, a different man was named to take charge of the hunt. At dinner time, this man, wearing a special ornamental chain, led the procession of tasty dishes into the dining-hall.

Thus it was during the Festive Season of 1606. The hunter of the day led the members of the Order into the log-built room and placed the steaming dishes on the rough, wooden table.

Champlain himself would lead the prayer of thankfulness for the bounty of the year, and then the company would fall to, with appetites commensurate with their spirits and the rigors of Canadian winter.

After the meal, singing and storytelling and the playing of musical instruments would end the great day.

Christmas customs which developed in Canada were, of course,

transplanted from Europe, although they underwent some changes to suit the Canadian scene.

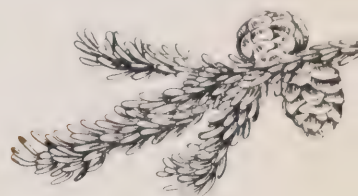
The traditional holly and mistletoe were not available, so early settlers rapidly learned to use other types of berries and greenery. Pine branches, cranberry cuttings and wintergreen became popular.

Early Nativity Scene

In 1672, Father Jacques Bruyas, in Iroquois country, reported a very successful Christmas to his superiors. In his tiny chapel, he built a nativity scene and lighted it with lamps and candles. He adorned the chapel with boughs and encouraged the Indians, Christian and otherwise, to come and see. They stood, he said, in wonderment. So impressed were they that they continued singing hymns till Easter!!

For a long time the principal influences on Canada's Christmases

(Continued on page 4)



by Ron Kenyon

WHILE STAYING at Port Royal, Nova Scotia, where he observed Christmas in 1606, Samuel de Champlain founded the Order of Good Cheer to boost morale.

THERE HAVE BEEN some changes made in Canada's traditional Santa Claus parades since the first Montreal event in 1925.



were the British and the French.

The later French Christmases were marked by the traditional *Messe de Minuit* (Midnight Mass) followed by the *reveillon de Noel* and a big family dinner. Among the traditional dishes of early French Canada of pioneer days were meat pie, fowl, meat balls, suet pudding and doughnuts. The dinner was followed by dancing and games until daybreak. This celebration of Christmas was still influenced by an earlier French age, for presents were not exchanged until New Year's Day (the Feast of the Circumcision.)

British immigrants celebrated Christmas with an enormous dinner of fowl, beef, plum pudding and mince pie. The pioneers had a large program of outdoor sports at Christmas time — sledding, sleighing and skating. Skiing was not part of the festivities, for it was not introduced until quite recently in Canada.

A typical pioneer, British-type

Christmas was reported by Mrs. C. P. Traill, of Rice Lake, Ontario, in 1838. She refers to a dinner of which the *pièce de résistance* was a "glorious goose, fattened on the rice bed in our lake." Turkeys, said Mrs. Rice, were not available except in older communities and beef was rarely seen in the backwoods.

For dessert there was a steaming plum pudding. After dinner the children played with a little sled made by the family.

As another example of a British Christmas, there is an early record of sports on the main streets of Winnipeg where sleds were driven at breakneck pace. The police, says the report, did not intervene.

After the American Revolutionary War, the Loyalists brought Puritan customs to Canada, and Christmas went into temporary eclipse. The Puritans themselves did not celebrate Christmas at all for they looked on it as a pagan festival handed down from Roman times.

A further striking change in Christmas came about after the middle of the last century, and it is from this time that most of our modern observances date. Some of them, like the Christmas tree, came from Germany. This custom was brought to Canada by German settlers in the Kitchener (then known as Berlin), Ontario area. At about the same time, though, British and American influences contributed to introducing the Christmas tree indirectly. Queen Victoria's consort, Prince Albert, introduced the tree into Britain from Germany, and this custom spread to Canada and America.

The turkey, which is native to the American continent, became increasingly popular for Christmas dinner, and this is one custom which we exported to Europe.

Meanwhile, Christmas stockings, also a German idea, spread to America and Christmas cards, originated in England, were adopted.

THOUSANDS of Toronto children braved torrential rain during the 1958 parade to welcome a motorized Santa Claus and reindeer. Toronto held its first parade around 1906.



(Photos courtesy of the T. Eaton Co. Ltd.)

ed rapidly the world over.

The very concept of Santa Claus changed. In early literature he is pictured as a funny little gnome covered in ashes and soot (from descending chimneys) and dressed in a brown tunic. He was depicted this way in early versions of the famous poem: "Twas the Night Before Christmas."

Christmas in Toronto

The price of Christmas, like everything else, has risen with the years. Back in 1876, Toronto's new Timothy Eaton store would sell gifts of ladies' French kid gloves for prices that seem ludicrous today: 24 cents a pair for the cheapest, 38 cents for the best. In those days, stove coal was six dollars a ton. At the St. Lawrence Market, where most citizens shopped, housewives had a choice of turkey, partridge, quail, squirrel, duck, deer, bear, moose or beef.

But if the prices were low, so

were salaries. Thus, we're no worse off at Christmas today than our forefathers were. In those days, ships were an important means of transport and the passenger vessels of the lakes fleet were laid up along the waterfront near the few railroad tracks.

Above the docks in 1876 lay the homes of the wealthy, strung out on lower Jarvis street, Wellington and Peter streets. Horse trolleys rattled along King Street in the drifting snow, and the town of 75,000 people was lit by gaslight. It was to be another three decades before Canada's most famous Christmas observance was to be launched — the Santa Claus Parade. The first parade was a tiny affair, in which "Santa" rode up from the railway station on a barrel, in a wagon drawn by a couple of steaming horses.

Today the parade is seen by more than a million people in Toronto alone by personal attendance or te-

levision; then it goes to Montreal for Santa's appearance there. A different parade takes place in Winnipeg and goes on by railway to other Canadian cities.

The growth of the famous parade underlines the way in which Christmas customs develop, and seldom really die out. The age-old nativity scene and the Christmas carol — ancient observances — are being blended with modern developments like the Christmas tree, a clean Santa Claus and the giving of many presents, into a kind of Christmas which seems traditional to us yet which, actually, is a relatively new kind of Christmas.

For those who say, as we all tend to do, that Christmas is losing its meaning and dying out, the facts prove us wrong. Christmas today is richer, more full of pageantry and celebration than it ever was. It has fused and joined in good fellowship the customs of people of many lands. ■



THOSE "WELCOME" * LIC



MORE THAN 100,000 sparkling lights were used in the unique "Christmas Showcase" sponsored by the Kiwanis Club of Toronto at the Canadian National Exhibition last year.



GROWING in popularity are civic Christmas decorative lighting contests. This scheme won first place in a contest sponsored by Port Credit P.U.C. in 1958.

SIMPLE YET DRAMATIC, this doorway sparkles in its holiday dress. A trio of 100-watt, blue-white spotlights located in the overhang above the doorway brings out the sparkle of the silver snowflakes and the beauty of the stencils flanking the doorway.



ITS



CHRISTMAS couldn't be merrier. You walk down a street on Christmas Eve. A hi-fi set's turned up; lovely carols fill your ear.

Passersby greet you with a cheery "Merry Christmas!" The street's especially attractive . . . many lawn displays are accentuated with the latest trend in décor—outdoor lighting!

It's this last feature that adds a special glow to the brightest holiday season of the year. Outdoor lighting provides pleasure for *everyone*; for neighbors . . . for the family which works together in a creative effort . . . for the community.

Whether you're an old hand at such decorations, or are trying them for the first time, you've embarked on the architectural and illuminating fields with your first display.

This shouldn't dampen your enthusiasm, however. According to experts, following a few simple rules of planning will result in a truly effective outside décor. But, please remember, there's more to this than just setting up a few strings of colored lights.

First and foremost, remember the *spectator's viewpoint!* Look at your house from across the street.

Which aspects should be emphasized? Is there a picture window . . . with a Yule tree visible? Place your outdoor figures of Santa and children so that they blend with your interior decorations.

What elements can be added to make a pleasing composition? From your vantage point, see if there are any large gaps, or crowding of your figures; space them so they're well balanced.

Your second consideration is *theme*. If it's your home, do you want to create a symbol of hospitality? If so, what architectural feature should be the focal point? Perhaps it's the traditional doorway with a fragrant wreath of greens. Il-

luminate from above with the new 100-watt colored flood bulbs.

Another popular door display is the "packaged look;" bright red ribbons with bow to make your home suggest a Christmas gift "package." Colored flood lights concealed behind nearby shrubbery can beautifully highlight such a display.

Perhaps your house serves as a backdrop to a lawn. If so, give careful thought where figures should be placed. How do they relate to holiday activities of the household? Will they interfere with entering, leaving, postal delivery, etc.? And give thought to secondary points of interest added and related to the central theme; a roof display for example.

One imaginative decorator left Santa's "pack" on the front lawn. To each side, carefully placed at a distance, were two of his reindeer (flat figures), "waiting patiently." Flood lamps angled at them threw their shadows against two different walls.

Another "spot" brought your eye to an upstairs window, where stuffed red trousers and black boots were arranged to give the appearance that Santa was stuck in the window.

The latter light was the strongest which brings you to the next point: *dramatize your theme*. Always accentuate the focal point of your theme with stronger illumination. Also emphasize it with color contrast, style and size relationship to other elements. The chief requirement: try to lead the eye of the spectator to your central theme.

Finally, according to lighting engineers, *unify all elements*. After you've planned your display on paper, acquired the necessary materials, placed and illuminated them, have a "sidewalk's eye" view to see if the desired effect has been achieved. If not, chances are there's

(Continued on page 32)

J. M. Hambley named General Manager; succeeds A. W. Manby on January 1

APPOINTMENT of J. Mervyn Hambley as General Manager of Ontario Hydro was announced recently by Chairman James S. Duncan. He succeeds A. W. Manby as top management executive of Canada's largest electrical utility on January 1, 1960.

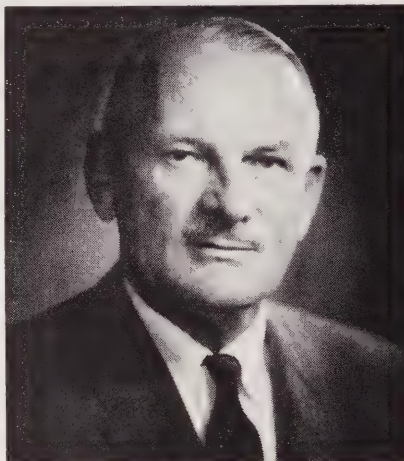
As General Manager, Mr. Hambley will be responsible for the province-wide operations of Ontario Hydro. The Commission employs approximately 16,000 people and has total assets valued at some \$2.5 billion.

In announcing Mr. Hambley's appointment, Mr. Duncan said he was "confident that Mr. Hambley will carry out his new duties with the outstanding ability, skill and dedication which has been characteristic of his career with Ontario Hydro.

"In the many demanding positions he has held with the Commission, Mr. Hambley has become widely and favorably known to members of the Ontario Hydro staff and to many associated with the municipal electrical utilities in all sections of the Province. Such a background of experience in Hydro operations and administration has provided him with a keen insight and understanding of the problems that confront Ontario's electrical utilities today.

"With the continuing growth of Ontario's economy, the changing pattern of power generation, and the promise of economical nuclear-electric energy, the responsibilities of general manager can be expected to assume even greater importance in the future," the Chairman said.

Mr. Hambley first joined Hydro in 1930 as an assistant engineer in the Operating Department, serving the Georgian Bay System and Northern Ontario Properties.



A. W. MANBY

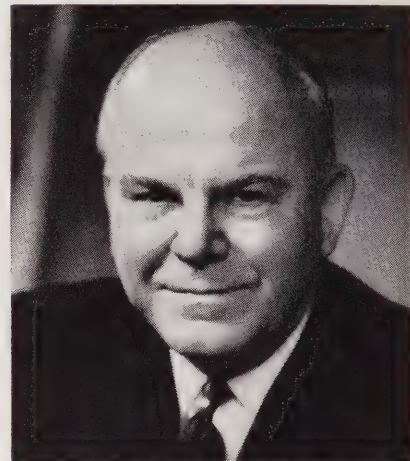
In 1945, he was appointed District Operating Engineer for the Abitibi, Sudbury, Nipissing, Timiskaming and Manitoulin Districts. Two years later he was named Director of Operations for the Commission. In 1953 he was appointed Deputy Assistant General Manager - Administration; in 1955, Assistant General Manager - Administration, and last June, Deputy General Manager.

Born at Copper Cliff, Ontario, Mr. Hambley received primary and secondary school education at Copper Cliff and Sudbury.

He worked for a year in the International Nickel Company smelter at Copper Cliff before attending Queen's University, from which he graduated in 1929 with the degree of Bachelor of Science, Electrical Engineering.

Following graduation he spent a year with the Canadian General Electric Company at Peterborough and Toronto before joining Ontario Hydro.

Mr. Hambley is a Director of the Canadian Electrical Association and a member of the Association of Professional Engineers of Ontario; the American Institute of Electrical Engineers; the Electric Club of Tor-



J. M. HAMBLEY

onto and the Board of Trade of Metropolitan Toronto.

Mr. Manby

Mr. Duncan also paid tribute to the retiring General Manager, whom he described as "an engineer of brilliant administrative ability, and a man whose sterling character and dedication to the ideals of the Province's Hydro enterprise will long be remembered by a host of friends associated with the Commission and the municipal utilities across Ontario.

"During his 38 years of service, he has seen Ontario Hydro grow from a small organization to one of the world's great electrical utilities — a growth in which he played a leading part. Mr. Manby held key executive positions with the Commission during the critical years following the Second World War when Ontario Hydro experienced an unparalleled period of expansion," Mr. Duncan said.

"I am confident that his many friends and Hydro colleagues share my respect and admiration for his unerring judgment and his devotion to the highest principles of public service. In addition to his heavy

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A.M.E.U. HONORS "MORT" ROGERS



FRAMED honorary membership scroll was presented to Mr. Rogers by J. A. Williamson, Niagara Falls (right). Key figures were A.M.E.U. President Ray Pfaff (extreme left), and O. S. Luney, Ottawa, former manager of Hydro's Eastern Region.



PRESENCE of these three A.M.E.U. Past Presidents: Rex Martindale, Sudbury (extreme left); J. E. Teckoe, Jr., Windsor, and A. W. Taber, Fort William (right), was a striking demonstration of the respect for Mr. Rogers among his Hydro colleagues.

FROM Fort William, Sudbury, Windsor, in fact from the four corners of the province — they came to honor a respected and popular colleague as the A.M.E.U. conferred its highest tribute — an honorary membership — on M.W. "Mort" Rogers, manager of Carleton Place Public Utilities Commission for the past 35 years.

This A.M.E.U. Past Presidents' dinner marked a pleasant departure from tradition for it was held at the Mississippi Golf Club, in the bailiwick of the guest of honor, instead of the customary Toronto setting.

For Mr. Rogers, the dinner demonstrated conclusively the esteem in which he is held by his own townsfolk, both as a citizen and in his capacity as manager of the electrical and waterworks system of Carleton Place; the presence of many O.M.E.A. and Ontario Hydro representatives manifested the respect which he commands among a host of Hydro colleagues across the Province, while the presentation of the framed honorary membership scroll marked a fitting recognition of his contribution to the growth and technical advancement of the province's municipally-owned electrical systems.

Master of ceremonies was Ray Pfaff, A.M.E.U. president, who introduced Major G. W. Comba and Carleton Place P.U.C. Chairman E. G. Patterson. Echoing their congratulatory sentiments on behalf of Ontario Hydro, First Vice-Chairman W. Ross Strike described Mr. Rogers as an authority on electrical system management, which had been recognized by Ontario Hydro and the Ontario Government a few years ago by his appointment as a member of the Commission's Advisory Council.

Climax of the evening was the presentation of the framed illumin-

Continued on page 31

Christmas 'round the



ON THE SHORES of Hudson's Bay, Eskimo children sing carols in the Anglican Cathedral at Aklavik.



DURING CHRISTMAS SEASON, young African Gold Coast citizens happily "dress up."

MAINTAINING a mediæval tradition, Village Mummers at Overton in Hampshire, England, present their traditional Christmas play in the snow.



world

IN THE WEEKS preceding his December 6 feast, Holland's "Sinterklaas" visits all the towns and villages, distributing small gifts to children in their hands, shoes or aprons.



AS A FORERUNNER of Christmas, each Swedish family, village, town and city chooses its "Lucia," some times called the Spreader of Light.

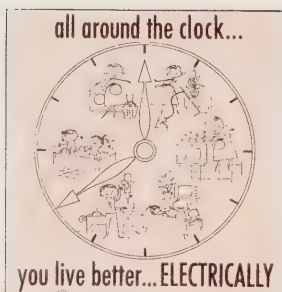
DURING SERVICES at St. Helena's, the women of Bethlehem wear a headgear which had its origin in Crusade times



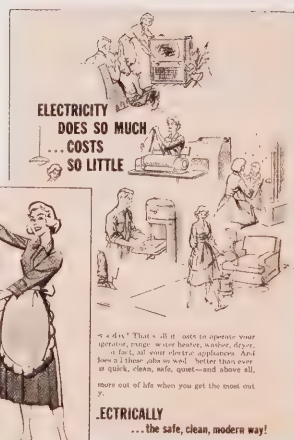
HOW DO WE



PROM



says, every day, electricity
of life more pleasant, more
your household tasks—and
electric appliances are the
me to devote to your home—
the most dependable servant
— with safety and efficiency
— and
ELECTRICALLY
the safe, clean, modern way!



(Continuing the series inaugurated in the November issue of Ontario Hydro News, the opinions of four Ontario Hydro representatives — First Vice-Chairman W. Ross Strike, I. K. Sitzer, assistant general manager - production and sales; D. J. Gordon, director of consumer service, and Gordon McHenry, manager of residential sales — on the subject of electrical utility promotional programs and effective methods of conducting these campaigns are presented in full below. Editor's note.)

1. Q: How does a utility start a promotional program? A: Of course the starting point in the promotional program and the most important factor in its success will be the decision of the local commission to promote and to really mean it.



◁ AN INCREASING TREND to outdoor living in the summer months provides electrical utilities with new opportunities for promoting sales of electrical appliances.



BUILT-IN electric dishwashers are being featured in model electric kitchens.

OTE ?

Each utility commission should review the local situation, and, if they believe that promotion is necessary and urgent, the decision to undertake such a program must be conclusive and dynamic as an indication to their staff that they want to see this effort succeed.

In other words, when a local commission makes the decision to promote, it must really mean it and back its decision with money and staff.

2. Q: Now the local utility has made its decision, what is the next step? A: A load building program must be *planned*. If the natural gas company is already in your town or is moving in, you must ask the question—"what are the vulnerable loads?"—then take the necessary steps to keep the gas company from

capturing these important loads.

If the event of gas is only in prospect, a load building program should still be undertaken by every municipality in any case, because increased energy sales will mean lower rates to your customers. The load building program should be tailored to meet local conditions.

3. Q: When we speak of local conditions, do we refer to the financial position of the utility? A: This is certainly part of the story. At this time of high interest rates, all utilities are concerned about financing capital expenditures, but let us not forget that it is the customers on your lines today that should be installing water heaters, dryers, buying electric blankets and so on, and these customers are more apt to increase their use of appliances if your re-

sale rates are as low as financial conditions will permit.

A review of Ontario Hydro's annual report clearly shows that a number of municipalities over the years have built up an excess of funds, and are still operating at a surplus, which more than provides for anticipated annual expenditures. These are cases where resale rates should be trimmed to obtain the best promotional effect. The collection of more revenue than is necessary for the utility's operation or abnormally high bank accounts are, in the final analysis, assisting the competitors.

4. Q: Where do customer relations fit in to a promotional program? A: Good customer relations are tremendously important to a

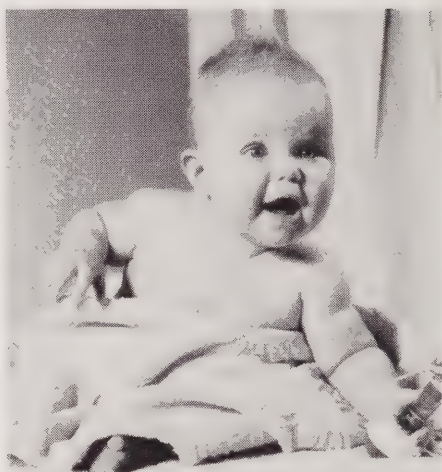
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VIGNETTES OF THE "HARD-SELL" ERA

or Service with a SMILE



"Gosh, Myrt, the boss has gone bugs on customer relations."



"You gotta get out and sell, men."



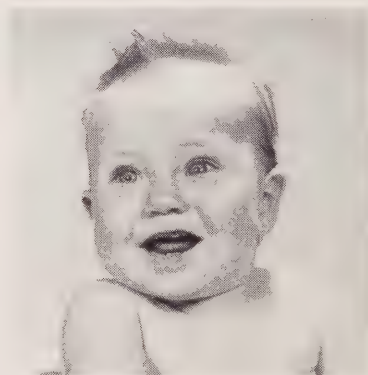
"Lady, please try to understand, I can't turn the meter off."



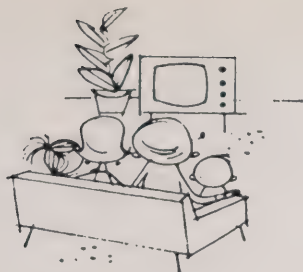
"Make up your minds, men, do you want a 30- or a 40-gallon tank in that ad I'm designing."



"You mean, I shouldn't use 30-amp fuses."



"Madame, I'm the new Hydro sales promotion man."



successful sales program. If we are buying an article, we wish to do so with confidence. This is certainly true of our electrical customers and our customer relations have to be such that these people will approach us with the *confidence* of dealing with friends. Everything possible should be done to maintain or improve customer relations and thus create the proper atmosphere for promotional work.

5. Q: How do we obtain good customer relations? **A:** Good customer relations are not obtained without a great deal of effort. It is something that you must work at all the time and a field where lip service is not enough. Your customers have to be shown by the actions of your employees that the utility has their best interests at heart, and should never be given the impression that your utility is a monopoly which condescends to provide electrical service.

In short, every customer should be given the VIP treatment. Also let us never forget many of our new customers who are setting up new homes belong to the "new generation" or are "new Canadians" and do not know Hydro and its history. These people will assess Hydro as they find it today.

6. Q: In what other ways can our employees help our promotion program? **A:** In the first place, they must be made "sales minded." All employees should use electrical equipment to the greatest possible degree so that they will be familiar with its use and be able to explain its advantages to our customers. Your best salesman can be your lineman explaining to his neighbor



THERE'S a growing appreciation among homeowners of the value of effective lighting.

over the back fence how the installation of an electric dryer has cut down the work in his household and, after all, neighbors still try to "keep up with the Jones."

7. Q: Are the municipal utilities and Ontario Hydro fighting this promotional battle alone? **A:** No, we have allies in the electrical industry. We have the manufacturers, the dealers, the electrical contractors, plumbers and so on. Within your own municipality you should discuss your problems with these people and obtain their co-operation in your promotional effort.

The subdivider or builder perhaps may not be an ally, and he is the man that you must reach with your promotional program to avoid "gas houses" in your community. Also

the electrical contractors and plumbers can go a long way to help you reach the builders with your promotional effort.

8. Q: Should utilities service appliances as part of a promotional program? **A:** Unfortunately many of the utilities that have serviced appliances in the past, discontinued within the last 20 years or so. There are a few utilities, mainly in Southwestern Ontario, where gas competition has been keenest, which are still engaged in this work. It is a field with tremendous potential and should be seriously considered by each utility unless someone else is doing the job satisfactorily. We are making a study of this matter now at Ontario Hydro because we recog-

(Continued on page 32)



THERE'S no black magic here—but there IS plenty of sparkling white magic in this suds-snow. It's made by whipping several cups of packaged soap or detergent and a minimum of water with an electric beater.

THIS YOUNGSTER is just bubbling over with enthusiasm for her artwork. With a bowl of suds-snow and tempera paint, she's able to make most of the Christmas presents needed to fill her gift list.



WITH BOWLS of easily-removable suds-snow, the small fry can have a fine time painting a Christmas mural on a mirror.

DAINTY DECORATOR is heaping the life-like plastic boughs with suds-snow—as beautiful as any in the great outdoors.



DOUBLE LIFE OF A SOAP

It's Christmas . . . visions of sugar plums dance in children's heads. What do *you* see—too much to do in a short time?

Those last-minute decorative chores, for example? Will they send you scurrying? You can end such anxieties—swiftly, and easily—with soapsuds.

That's right — soapsuds! It's a novel way to complete holiday projects; glistening suds whipped up like snow will decorate your Christmas tree and gift boxes . . . adorn

ONTARIO HYDRO NEWS



SUD

your crèche . . . bring three-dimensional artwork to your mirrors and windows . . . provide an effective safety valve for your youngsters' excitement.

"Suds-snow" not only works like magic, it's as simple to produce as rubbing Aladdin's lamp. All you do is pour several cups of packaged soap (or detergent) and a minimum of water into a bowl. Beat with an electric mixer until suds have the consistency of whipped cream and you're ready to decorate!

Start with your Christmas tree. Realistic suds-snow will bring that white Christmas to your evergreen no matter what the weather *outside*. Using a spoon, drift some "snow" artistically on the boughs of your tree.

If the tree is white, add vegetable coloring while mixing your suds to achieve a beautiful color contrast. A similar "snowfall" provides just the right décor for the roof of your crèche and on holly and evergreen sprigs that surround it.

After "frosting" your tree, complete your decoration with distinctive ornaments made from the same basic soap — but mixed to a stiff dough-like consistency. For example, fill a cookie press with these thick suds. Then press snowflake circles or diamonds — with holes in the middle — on to a cookie sheet, and add glitter for a sparkling touch. Let them dry for 24 hours and they're ready to be tied to the boughs of your tree with colorful

(Continued on page 31)

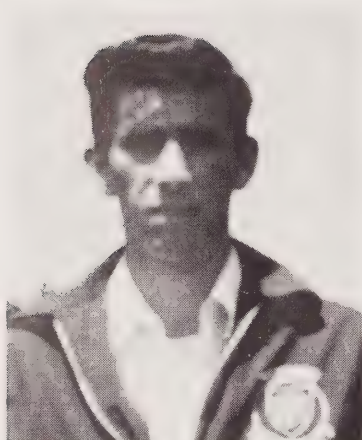
ONTARIO HYDRO SCHOLARSHIPS



ENCOURAGING enrollment and outstanding achievement in professional engineering and other technical courses, Ontario Hydro presented 12 scholarships totalling \$3,300 again this year to students studying at three Ontario universities and three other educational institutions.

The scholarship program, inaugurated in 1952, is a tribute to distinguished graduates in fields relating to the operations of the Commission.

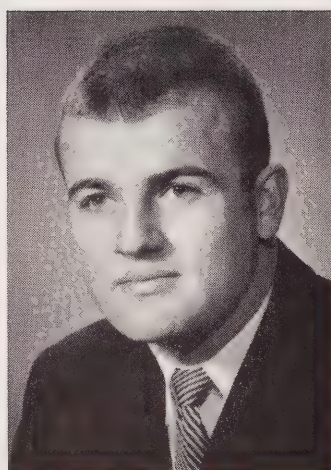
For the third successive year, Ontario Hydro presented \$300 awards at the University of Western Ontario, London, to three students. One scholarship was presented in 1955, following completion of the first year of the engineering science



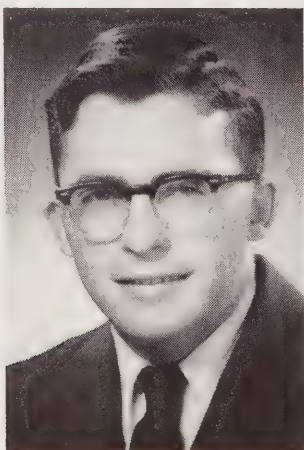
JOHN McCORQUODALE
Lakeside



JOHN WESTRA
Toronto



EDWARD AZIZ
London



JOHN P. DUFFY
Glanworth



DONALD TAYLOR
Burlington

ONTARIO HYDRO NEWS

course inaugurated in September, 1954. By 1957, three scholarships were being offered. This year's University of Western Ontario winners were: First year — John A. McCorquodale, R.R. 3, Lakeside, Ontario; Second year — John P. Duffy, R.R. 2, Glanworth, Ontario; Third year — Edward Aziz, 81 Upper Avenue, London, Ontario.

At the Ryerson Institute of Technology, Toronto, where Ontario Hydro presents a \$200 scholarship in the second year of a three-year course in the Institute's School of Mechanical and Industrial Technology, the winner this year was: John Westra, 148 Graham St., Woodstock.

A \$300 scholarship, based on academic standing and need, was presented

at Port Arthur's Lakehead Technical School in support of the school's applied science course. This year's winner was: Donald T. Siira, 268 South Empire Avenue, Port Arthur.

At both Queen's University, Kingston, and at the University of Toronto, three scholarships of \$300 each were awarded, based on the final standings for the first, second and third year's work of students taking any engineering course related to the Commission's operations.

At Queen's University, the Hydro scholarships were awarded to: First year — Donald Robert Taylor, 48 Flatt Road, R.R. 3, Burlington, Ontario, (Engineering Physics); Second year — C. G. Gray, 66 Glengowan

Road, Toronto, (Engineering Physics); Third year—J. K. Daniel, 98 Humboldt St., Port Colborne, Ontario, (Mechanical Engineering).

This year's winners at the University of Toronto were: First year

Gordon McAlpine Bragg, 15 Wimbeldon Road, Toronto, (Mechanical Engineering); Second year

Rein Luus, 140 Central Park Ave., Sault Ste. Marie, (Engineering Physics); and Third year Neil R. Risebrough, 391 Sherbourne Street, Toronto, Metallurgy.

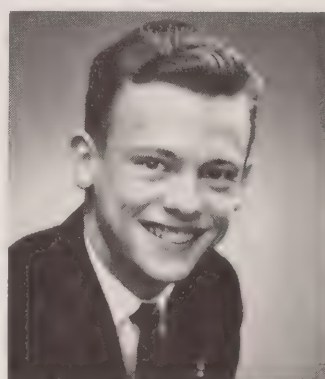
The \$100 scholarship presented to the most worthy cadet at the Royal Military College of Canada, Kingston, entering his fourth year of the electrical engineering course has been awarded to: Officer Cadet J. G. Despatis.



C. G. GRAY
Toronto



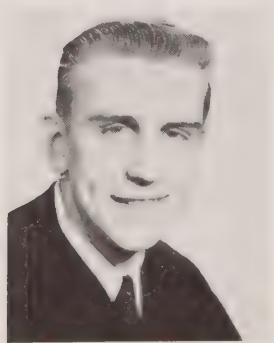
J. K. DANIEL
Port Colborne



GORDON BRAGG
Toronto



REIN LUUS
Sault Ste. Marie



NEIL RISEBROUGH
Toronto



J. G. DESPATIS
Royal Military College

RED ROCK RÉSUMÉ

New Mississagi River plant scheduled for completion early in 1961

THE picturesque Mississagi River has been contributing vital electric power to the development of North-eastern Ontario since 1950 when the massive wedge of concrete known as the George W. Rayner Generating Station was anchored between its precipitous banks. At the time, this 47,000-kilowatt development was sufficient to meet all of Hydro's requirements in the Algoma and Lake Huron north shore areas, with a surplus for distribution elsewhere in that part of the province.

The discovery of uranium at Elliot Lake altered the situation dramatically. The greatly increased economic activity sparked by this enterprise was enough to affect the pattern of power distribution. Thus the resources of the North-eastern Region have been supplemented by larger transfers of power from the Southern Ontario System on many occasions. To help balance the supply picture, the waters of the Mississagi are again being harnessed.

Rapidly approaching the half-way mark in construction, the new project is located at Red Rock Falls, just 15 miles down the narrow, turbulent river from the towering Rayner station. Red Rock G. S. will have two units with a combined capacity of 38,000 kilowatts, making it the smallest of the 13 hydro-

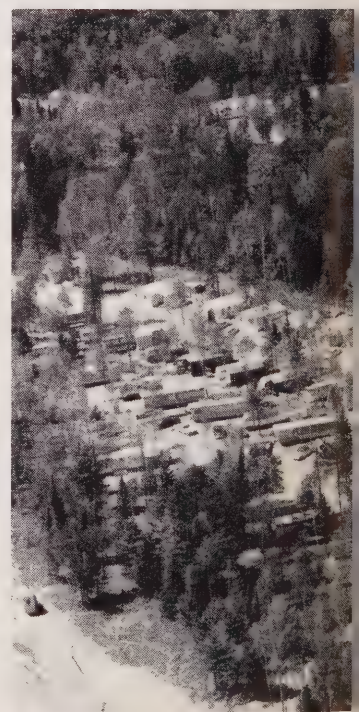
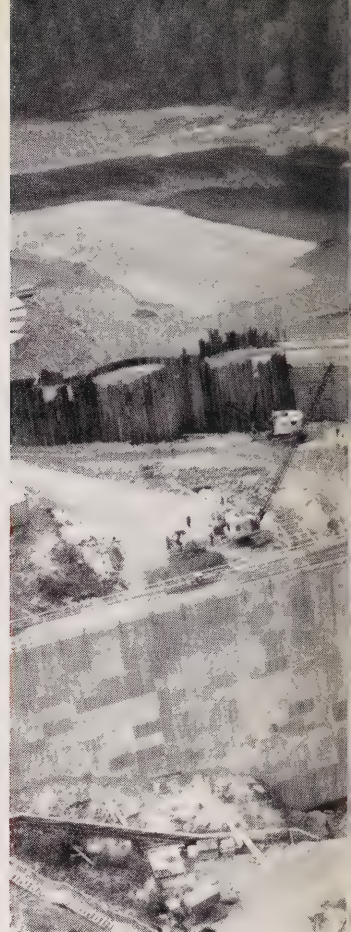
electric plants built by the Commission since World War II.

Not large by Hydro standards, perhaps, the new Mississagi River development stacks up as quite an undertaking by almost any other yardstick. Approximately 500 men are presently at work on the site, and they will place an estimated 97,000 cubic yards of concrete, and excavate about 180,000 cubic yards of earth and rock before work is completed, early in 1961. Cost of the job is estimated at \$19 million.

Close to Civilization

In contrast with many of Hydro's recent northern hydraulic projects, located deep in the wilderness, Red Rock is within shouting distance of civilization. Its accessibility was an important factor in determining the economics of this development. Only two miles of access road were required to gain entry to the site, which is four miles from the Village of Iron Bridge, on Highway 17, and about 16 miles west of Blind River. Virtually no transmission line construction is involved since the plant will be tied in with the Rayner-Sudbury circuits within a few hundred yards of the site. The station will be remotely-controlled from the Rayner plant.

In laying out the camp at Red Rock, much of the natural tree





CONSTRUCTION of the principal structures of the Red Rock development (from the left: the east wing wall, headworks and intakes, centre gravity section and four sluiceways) is making rapid progress. Three additional sluiceways and a wing wall will extend the main dam to the towering cliff partially visible on the right.



TRIM HOMES and trailers line the temporary streets of the attractive Red Rock colony. Some of the camp buildings can be seen in the clearing (left background)

DECEMBER, 1959



by DON WRIGHT

cover was retained so that the trim, aluminum-clad buildings, on a flat and well-drained site, have the appearance of a carefully-planned suburban subdivision. The administration office and service buildings line both sides of a street overlooking the river, while the dormitories, cafeteria, recreation centre and colony are grouped away from the work area — insulated against the noise of construction by sheltering trees.

The camp is required to accommodate only about 60 per cent of the men employed on the project because the remainder were recruited locally and commute daily between the job and their homes. Red Rock's proximity to established communities eliminated the need for schools and a hospital. Most of the project workers send their children to the Iron Bridge Public School where Hydro contributed toward the cost of extra classroom facilities required to handle the sudden pupil influx.

Construction forces moved into Red Rock in the spring of 1958, and by the end of the year the bed of the river in the five-sluiceway diversion sections had been dewatered, and was ready for first concrete. Faced with the need of advancing this section far enough to help pass

(Continued on page 22)

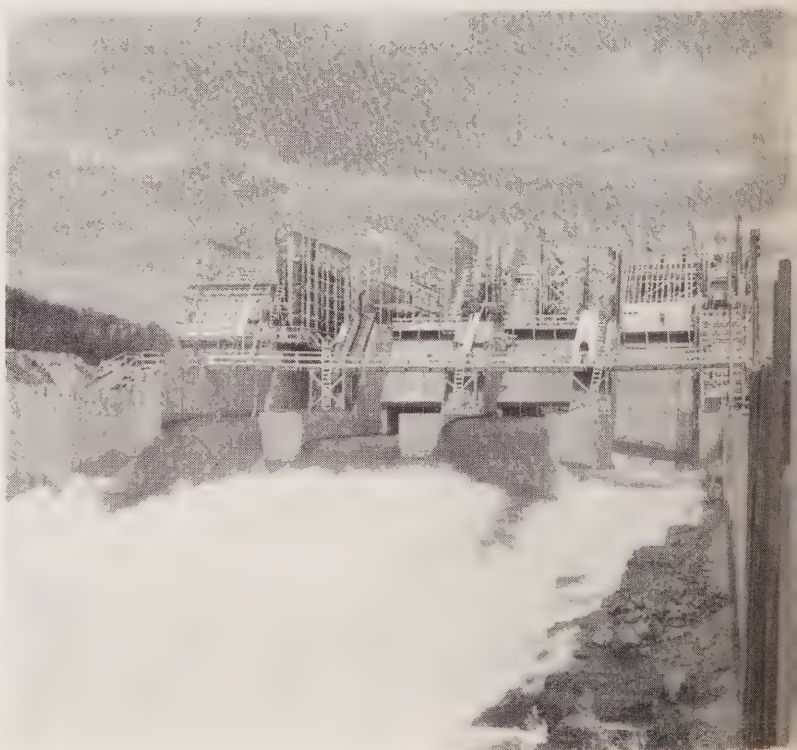
the spring run-off, which is many times the river's normal flow, concrete was poured all through the bitter cold of winter without prejudice to the quality of the work or discomfort to the workers. This was accomplished by enclosing the entire diversion area in a Bailey Bridge structure sheathed with plywood. Steam was piped in from the camp boiler house, and the men were able to work in their shirt sleeves while sub-zero temperatures prevailed outside.

High water is also log-driving time on the Mississagi, and some 270,000 logs were passed through the new sluiceways at Red Rock this spring. The annual river drive is quite an event for the colony at Rayner G.S. where the operators and their families never tire of watching the giant logs plunge down the steep chute incorporated in the main dam. Most of this timber is white pine destined for the great McFadden sawmill at Blind River. Red Rock will have its own log chute for the 1961 drive.

One of the earliest undertakings at the Red Rock development involved extensive channel excavation in the Shino Rapids section, about a half-mile downstream from the powerhouse site. This channel work, which will add 10 feet to the operating head of the plant, involved the excavation of 100,000 cubic yards of hard-packed gravel. Many thousands of dollars in additional excavation were saved by enlisting the aid of the river itself. The material was removed at precisely the right spot so that the action of the fast-moving water flushed out vast quantities of sand and silt from the river bed upstream from the excavated area.

Construction on Schedule

Work is progressing almost directly on schedule at Red Rock and no major unforeseen difficulties have been encountered up to the present. The east wing wall has been completed; the headworks, centre gravity section and erection bay are well advanced, and concrete pour-





EXCAVATION of some 100,000 cubic yards of hard-packed gravel in the tailrace section will raise the operating head by 10 feet.

TEMPORARY FORMWORK for the 90-foot high rollways makes a striking pattern.

ing has commenced at the powerhouse proper. The third and final cofferdam stage has been completed, and the entire river flow is now being directed through one open sluiceway and two temporary diversion ports.

Five sluiceways have been poured to final elevation, and concrete work has started on the remaining two, which will be adjacent to the west wing wall. The towering cliff overhanging this side of the project was covered many feet deep with loose rock which had to be removed. This slow, tedious and potentially dangerous task was accomplished by gangs of drillers, using hand tools and secured with safety lines, as they worked as high as 200 feet above the base of the cliff.

Work will be concentrated on the west wing wall, powerhouse superstructure, and west sluiceway area during the coming winter. Private contractors have already cleared the greater part of 1,500 acres, which will be affected by the flooding.

Due to certain unusual engineering characteristics, the Red Rock project was reproduced in hydraulic model form prior to the start of construction. The model was particularly helpful in overcoming problems associated with the high sluiceways, downstream channel improvements and the design of the log chute.

The problem posed by the unusual height of the sluiceways involved selecting the least costly

method of dissipating the tremendous kinetic energy generated by the water during a plunge of almost 90 feet. Without some means of dissipating this force, it would almost certainly undermine the lower components of the dam and powerhouse over a period of time. The most economical solution also promises to have the most spectacular effects.

Bucket Rollways

Rather than build expensive concrete weirs or piers in the tailrace area, against which the water could expend its energy, "bucket" type rollways have been designed which will "skijump" the water downstream and out of the area where it could cause damage. At the peak of the spring freshet, the water may fly to a height of 30 feet and land as far as 100 feet downstream from the rollway. Signs and warning buzzers will be installed to alert boats to the danger. This is the first time Ontario Hydro has used this type of rollway, but it is not a new development in hydraulic engineering.

One feature of the Red Rock scene which seldom fails to draw comment from visitors is the colorful headgear worn by the workers. The use of colored hard hats to designate the occupation of their owners commenced at the Whitedog and Caribou Falls projects, and it seems to have reached its ultimate application at Red Rock where a dozen hues can be discerned throughout the various work areas. The practice makes it possible to locate a particular type of tradesman immediately in the event of an emergency, and it has important supervisory and safety advantages.

Construction Manager Bill Reynolds and Resident Engineer Baji Ghadiali are leading Hydro's field forces in this bid to wrest more electric power from the turbulent waters of the Mississagi at Red Rock Falls. Both these experienced hydraulic engineers were formerly engaged on the Whitedog-Caribou Falls development. Jack Soare is the project engineer at Head Office. ■

(From Highway Magazine)



WELL, THEY WERE THE LOW BIDDERS!

SERVICE IN THE FIELD

by P. J. Maitland

AN ELECTRICAL utility in a small Ontario community began to receive a steady stream of complaints from customers several months ago. Lights were flickering for brief periods, and pictures on television screens were shrinking to postage-stamp size at regular intervals.

Like dozens of other technical problems which arise in the provision of electrical service, the case of the shrinking TV images soon arrived at the desk of a consumer service engineer in one of Ontario Hydro's nine regional offices. Once the culprit was tracked down, a solution was relatively simple. An industrial customer in the area had installed a high-powered piece of equipment which was dragging down voltages for intervals of 20 seconds; some adjustments in distribution facilities quickly removed the trouble.

This incident illustrates one of the important functions of Ontario Hydro's regional organization—the provision of quick and efficient service to municipal utilities, rural customers and direct industrial users throughout the province.

Behind the consumer service engineer, who is responsible for customer relations, stand the staff of the regional office — specialists in operations, power distribution, engineering, accounting, personnel and other aspects of utility operation. The functions of a regional office cover a wide area. The region could be called the administrative cornerstone of Ontario Hydro's province-wide operations.

Decentralized Operations

Sometimes termed "miniature head offices," the regional office system was established in 1947 to decentralize the operations of the Commission. The province was divided into nine regions. Boundaries were determined by transmission circuit arrangements to make each a complete power supply unit.

Although no region can be con-

sidered typical, Niagara — the smallest geographically — provides a fairly representative cross-section of regional services.

Manager of the region is J. R. (for John Russell) McCullough, a professional engineer who has worked for Ontario Hydro since 1926. From his office in the regional office building overlooking Niagara Falls, Mr. McCullough directs the activities of approximately 1,000 employees. The region contains 31 direct industrial customers, 16 associated municipal utilities and four rural operating areas serving customers outside the municipal system.

Mr. McCullough's principal engineering advisers are Melville Jones, operations engineer, and Howard Graff, consumer service engineer. Since the emphasis at Niagara is upon generation, Mr. Graff's consumer service staff is small in comparison with other regions. In his department are superintendents of consumer service, sales promotion and electrical inspection.

"Generally speaking," Mr. Graff explains, "the consumer service engineer has three functions: customer relations and contracts, sales promotion and electrical inspection."

Contact With Utilities

"The consumer service engineer," he explains, "is the contact man between the municipal utilities and the departments of Ontario Hydro, both in the region and at head office. I either provide the required assistance directly or arrange for it to be supplied by another department."

In his work with the municipal utilities, Mr. Graff usually deals with the utility manager.

"I might attend a local commission meeting once or twice a year in an advisory capacity."

The major areas in which the consumer service engineer is involved with municipal operations are low voltage conditions, distribution problems, budget and finances, rates



and debentures and the sale and purchase of facilities. The number of requests for technical assistance usually varies inversely with the size of the local utility. The larger ones are usually equipped to handle most of their own problems, Mr. Graff points out.

For large industrial customers served directly by Ontario Hydro, the consumer service engineer checks voltage conditions, deals with rates and service contacts, gives advice on substations, plant wiring and other electrical problems, and generally helps to ensure that the customer is making the most efficient use of his power supply.

In addition to these jobs, Mr. Graff advises managers of the rural areas on service to customers in their areas.

"Probably half the problems I get involved with can be dealt with over the telephone," Mr. Graff says. "For more complicated matters, extra work is involved. In such cases, either a member of my staff or I visit the customer concerned."

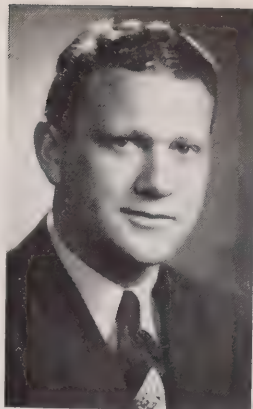
Sales Superintendent

A recent addition to the Niagara Region consumer service staff is A. M. (Sandy) Bizzell, superintendent of sales promotion. Under the direction of Mr. Graff, Mr. Bizzell supervises Ontario Hydro's sales promotional campaign and assists municipal utilities and the Commission's area managers, in organizing their own promotional activities (see *Ontario Hydro News*—June, 1959).

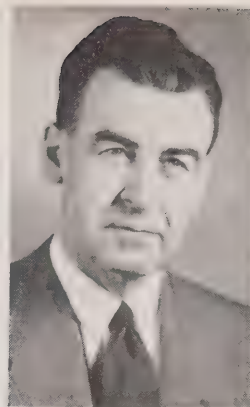
Since Niagara has the heaviest concentration of generating capacity within the Ontario Hydro system (Niagara Region's dependable peak capacity of 2,344,000 kilowatts represents more than one-third of the total for all regions), the operations group is the largest department within the region.

Mel Jones, the operations engineer, is responsible for the operation

(Continued on page 26)



W. H. EDWARDS
West Central Region



J. C. FERGUSON
Georgian Bay Region



H. R. GRAHAM
Northeastern Region



E. G. GURNETT
East Central Region



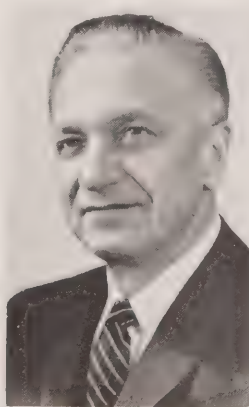
R. M. LAURIE
Western Region



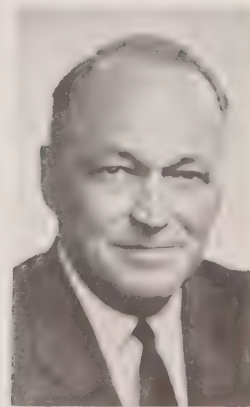
J. R. McCULLOUGH
Niagara Region



D. I. NATTRESS
Northwestern Region



A. M. PEDERSEN
Eastern Region



A. W. S. SMITH
Toronto Region



MAP OF ONTARIO SHOWING REGIONAL BOUNDARIES.

OFFICIALLY OPENED in 1958, the two-storey headquarters building of the East Central Region on Belleville's eastern outskirts is typical of the design of Ontario Hydro's regional offices.



and maintenance of all power facilities in the area.

"Altogether," says Mr. Jones while doing a fast mental count, "we have 69 generating units in the region."

The Niagara Region plants range in size from the giant Sir Adam Beck-Niagara No. 2 to the original plant at DeCew Falls, built in 1898.

Seven superintendents under Mr. Jones direct the daily activities of the operations department, which employs approximately four-fifths of the region's total staff. It is their job to operate and maintain the power system, including the overhaul of generating and electrical systems, of transmission lines, supervision of meters and relays and forestry work.

The next largest group within the region is the accounting department, headed by Accountant George Conn. In addition to internal activities such as budget, cost control, payrolls, etc., the accounting department assists in the financial and bookkeeping operations of the municipal utilities.

Travels 5,000 Miles Annually

E. M. (Ed) Frantz, the senior municipal accountant, travels about 5,000 miles a year making regular visits to the municipalities in the region. In addition to his regular work, Mr. Frantz often pitches in when a senior utility financial executive is ill.

"Besides inspecting the books and several associated duties, I help out generally anywhere I can and give advice on financial and accounting practices," Mr. Frantz explains.

People are vital to the success of any organization, and another important group in the regional structure is the personnel department, headed at Niagara by E. G. (Bill) Reynolds. As personnel officer, he acts as an adviser in personnel problems and collective relations. He is also responsible for initiating new personnel "programs," administering staff training and development programs, besides being involved in

(Continued on page 30)

HONORS FOR JOHN MCGREGOR



FIRST IN LINE to offer best wishes to John McGregor (left) was the new General Manager, Harry Hyde. Other new appointees (from left): McDonald White, assistant general manager; Bruce Prentice, assistant to general manager—engineering, and Jack Ramsay, ass't to general manager—administration and secretary, await their turn.



EXPRESSING their esteem and a regretful farewell to Mr. McGregor were Chairman Bert Merson (left) and Vice-Chairman John McMechan.



HOLDING the bouquet presented to her, Mrs. McGregor and her husband admire one of the gifts from the staff, a radio-hi-fi record player.

CONCLUDING a distinguished 48-year career with the Toronto Hydro-Electric System, John S. McGregor received a standing ovation from 1,200 fellow workers attending a testimonial dinner in his honor.

Mr. McGregor, who retired as General Manager on October 31, heard many tributes to his long and valuable service with one of the world's largest municipally-owned utilities and to his immense personal contribution to its growth.

In recognition of his Scottish ancestry, the retiring utility executive and the other head-table guests were escorted to their seats by Pipe Major Archie Dewar and Pipe Sergeant Ross Stewart, both Toronto Hydro employees wearing the uniform of the 48th Highlanders Regiment.

"No man has been closer to the hearts of the people of Toronto Hydro than Jack McGregor," Chairman Bert Merson said when he presented Mr. McGregor with a wallet and a "suitable enclosure" on behalf of the Toronto Hydro Electric Commissioners.

A portable television set and a combination high-fidelity radio-record player, presented to Mr. McGregor by Stanley Tinker, expressed the esteem and good wishes of the employees. Mr. Tinker stated: "Jack McGregor was zealous in his concern for Toronto Hydro as a business institution, but equally as zealous for the welfare of Toronto Hydro employees." One of the founders of the Toronto Hydro-Electric Club, Mr. McGregor was its first president.

A member of the Toronto Hydro War Veterans' Association, Robert Gillies, presented a pipe and tobacco to Mr. McGregor, who is an honorary member of the association. Then came recognition of the retiring executive's family as Miss Greta Connell presented a bouquet of 48 roses to Mrs. McGregor.

(Continued on page 31)



LET'S CHAT



with Gwyneth Reed of Ontario Hydro's Homemakers' Service

"BRING ON THE CHRISTMAS GOODIES"

DECEMBER spells "Christmas"! Christmas conjures up dreams of Santa, evergreen, holly, family and friends. It is hospitality time and for days ahead, our kitchens are filled with the appetizing aromas of Yuletide favorites. We should like to pass on a few recipes that you may add to your traditional Christmas ones.

First we have two jellied molds to serve as salads or as accompaniments to the noble bird.

Cranberry Wreath Salad

- 1 package strawberry gelatin
- 1 cup hot water
- 1 cup cranberry sauce or relish
- 1½ cups crushed pineapple
- 1 package lemon gelatin
- 1¼ cups boiling water
- 2 cups tiny marshmallows
- 1 3-ounce package cream cheese softened

½ cup mayonnaise

¼ teaspoon salt

½ cup cream, whipped

First Layer: Dissolve strawberry gelatin in hot water. Add cranberry sauce. Pour into 6½ cup ring mold. Chill until firm.

Second layer: Drain pineapple, reserving syrup. Dissolve lemon gelatin in boiling water; add marshmallows and stir until melted; add pineapple syrup. Chill until partially set. Blend cream cheese, salt and mayonnaise. Add to marshmallow mixture. Stir in pineapple. Fold

in whipped cream. Pour over first layer. Chill until firm. Unmold on bed of curly endive.

Golden Apricot Stars

- 3½ cups canned apricot halves (no. 2 ½ can)

¼ cup vinegar

1 teaspoon whole cloves

4 inches stick cinnamon

1 package orange gelatin

Drain apricots. Add vinegar and spices to apricot syrup. Bring to boil and simmer 10 minutes. Strain, measure and add water to make 2 cups. Add gelatin, stirring until dissolved. Pour over apricot halves in star-shaped molds. Chill until firm.

To serve at holiday breakfasts, or when your friends drop in for coffee, nothing adds more glamor than a nutty, hot bread.

Pecan Coffee Ring

1¼ cup melted butter

½ cup sugar

2 teaspoons cinnamon

pecan halves

2 packages refrigerated biscuits

Brush 6½ cup ring mold with melted butter. Mix sugar and cinnamon. Sprinkle some over bottom and sides of mold. Place ring of pecans in bottom and cover with a layer of biscuits. Brush biscuits with melted butter and sprinkle with sugar mix. Dot with pecan halves. Repeat twice, omitting nuts from

top. Bake at 375° for 30 minutes. Cool 10 minutes before removing from pan. Serve warm.

Christmas Stollen

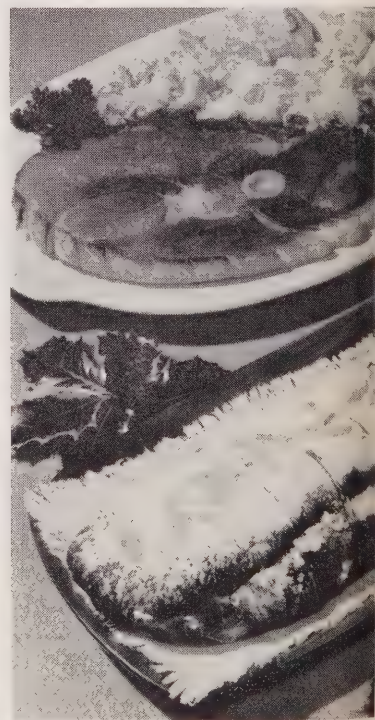
4½ cups sifted flour

1 teaspoon salt

1½ teaspoons grated lemon rind

1 cup butter or margarine

1 cup chopped mixed candied fruit



ONTARIO HYDRO NEWS

- $\frac{1}{2}$ cup sugar
- 1 cup milk
- 2 packages dry yeast
- 2 eggs, slightly beaten

Combine flour, salt and lemon rind in large bowl. Cut in shortening. Mix in candied fruit. Heat milk to lukewarm; add sugar and yeast, stirring until dissolved; add eggs. Stir into flour mixture. (If dough seems too moist, add $\frac{1}{2}$ cup flour). Knead dough on lightly floured board until smooth. Place in greased bowl. Brush with melted butter and cover with damp towel. Allow to rise in warm place, until double in bulk. Turn out on floured board. Knead. Shape into 2 loaves. Place on greased baking sheet. Cover and let rise until double in bulk. Brush with melted butter and bake at 375° F. for 30 minutes. Frost with confectioners' icing and decorate with candied fruit.

Perhaps you have eaten mince pie and plum pudding and are looking for a change. The cheesecake is both delicious and pretty. The cake is light, colorful and could be used as a centerpiece.

Yuletide Cheesecake Pie

- $1\frac{1}{4}$ cups graham cracker crumbs
- 4 tablespoons sugar
- 4 tablespoons melted butter
- $1\frac{1}{2}$ package cream cheese (8 ounce package)
- 2 eggs
- $\frac{1}{2}$ cup granulated sugar
- 1 teaspoon lemon juice
- 1 teaspoon lemon rind

Mix until crumbly the graham cracker crumbs, 4 tablespoons sugar and butter. Reserve $\frac{1}{2}$ cup. Press the rest of crumb mixture to bottom and sides of well-greased 9" pie plate.

With electric mixer, beat cheese, eggs, sugar and lemon juice until smooth. Stir in lemon rind. Pour into crust. Cut a paper star and place in center of the pie. Sprinkle remaining crumbs around it. Remove star. Bake at 350° for 30 minutes. Chill. Serve with red or green cherries garnishing the star.

Cranberry Angel Cake

- 1 loaf angel cake
- 1 recipe cranberry filling
- 1 recipe Snowcap frosting
- cranberries for trim

Split angel cake, spread with filling and frost. Decorate with cranberries.

Cranberry Filling

- 1 cup sugar
- $\frac{1}{2}$ cup water
- 1 tablespoon quick-cooking tapioca
- 2 cups fresh cranberries
- 2 teaspoons lemon juice
- $\frac{1}{2}$ cup chopped walnuts

Combine sugar, water and tapioca. Bring to a boil. Add cranberries and cook till mixture is thick and tapioca clear. Remove from element. Add lemon juice and cool. Add chopped nuts. Fill cake.

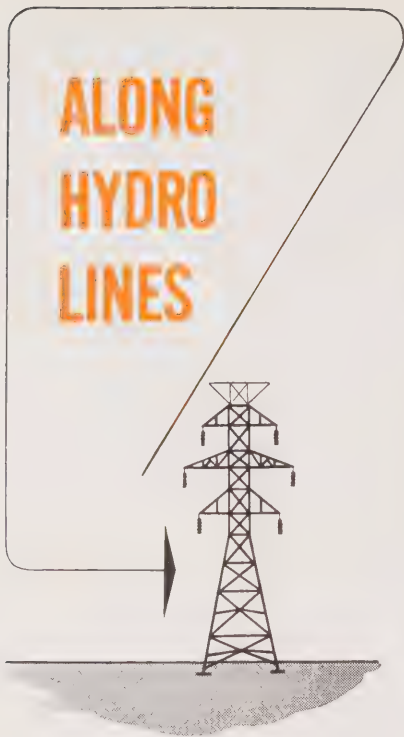
Easy Snowcap Frosting

- 1 egg white
- $\frac{1}{2}$ cup light corn syrup
- $\frac{1}{4}$ teaspoon salt
- $\frac{1}{2}$ teaspoon vanilla

Combine ingredients and beat till frosting is fluffy and of spreading consistency. Tint pale green if desired. Frost cake.

Christmas cake, cookies and eggnog are both easy and traditional
(Continued on page 32)





Utility buys radio system

A two-way radio system has been installed in the office and trucks of Paris P.U.C., to increase co-ordination of utility operations.

The utility office is located in a valley, necessitating erection of a 50-



foot aerial on top of the municipal building. This will convey messages from eight to ten miles.

In the accompanying photograph, Manager George Boucher (seated) receives instructions from David Bowen, Brantford, on operating the transmitter.

ATTEND HYDRO CONFERENCE IN TORONTO



Members of local utility commissions in the Niagara area visited the Head office of Ontario Hydro in Toronto recently where they were welcomed by Chairman James S. Duncan and other senior officials. Among those attending the one-day conference were the representatives shown in this picture. They are, from left to right: H. H. Godden, chairman, Grimsby Hydro-Electric Commission; R. D. Hunter, commissioner, St. Catharines Public Utilities Commission; Mr. Duncan and Walter Tuck, chairman, Smithville Hydro System. The occasion provided an opportunity for the visitors to learn at first hand about the functions and operations of the Ontario Commission in relation to those of local commissions.

SERVICE IN THE FIELD

(Continued from page 26)

pension and insurance schemes, wage and salary administration, staff promotions and changes.

In addition to his activities as regional personnel officer, he frequently gives advice or guidance to officials of local utilities pertaining to municipal staff relations.

Lloyd Young, the information officer at Niagara, also deals mainly with people—but in his case it's the general public. Niagara Falls and Ontario Hydro's generating stations attract thousands of visitors each year (in 1958 approximately 68,000 persons toured the Sir Adam Beck-Niagara No. 2 station). Five or six guides work at the Hydro reception centre at Queenston during the summer months. Responsible for the supervision of regular tour facilities, Mr. Young also personally escorts many special guests on visits to Hydro installations at Niagara.

Mr. Young is also responsible for liaison with 14 daily and weekly

newspapers in the districts as well as radio and television stations. He also works closely with municipal utilities and co-operates in making arrangements for advertising and publicity campaigns, official ceremonies and other activities.

These are just a few of the people who help to oil the wheels of Ontario Hydro's regional organization. In eight other offices (at Toronto, Hamilton, London, Belleville, Ottawa, Barrie, North Bay and Port Arthur) similar staffs are busy with more or less the same tasks: maintaining close contact with an ever-growing circle of electrical customers, and promoting understanding of the operations and objectives of the province's expanding electrical system. ■

Sales Promotion Officer

Port Arthur P.U.C. has appointed George Hunter to the new position of sales promotion officer in the Light and Power Dept. He was formerly employed as warehouseman in this department.

SOAP SUD

(Continued from page 17)

ribbons or strings. You can also glue them to any flat surface.

Versatile suds-snow comes in handy for decorating gift packages, too. Just wrap your presents with attractive paper . . . fill a pastry tube with medium dense suds . . . and you're ready to "draw" any appropriate design for the occasion — initials, messages, snowflakes, candy cane, or what have you. Place these on the broadest surface of your box and accent them with holly sprigs or miniature balls. You'll find you've created the most distinctive packages under your tree!

There's one more happy side to the advent of snow-suds for the Yule season. They provide a constructive medium for your children — a happy outlet during your flurry of Yuletide activity. Let them have fun decorating the mirrors and windows of their rooms with Christmas pictures. Armed with no more than paint brushes and a bowlful of thick suds, they can create striking 3-D effects — that wash off after the holidays easily as any soap does, leaving your mirrors and windows cleaner than ever!

Youngsters can also make Christmas gifts from suds! One idea: a pencil holder made from an empty frozen juice can. First, the top has to be removed. Then your child colors the can, using a mixture of one teaspoon of soap or detergent to two or three teaspoons of tempera. This is an important recipe because tempera paints adhere to shiny, waxed, or metal surfaces only when soap or detergent is added.

After the paint dries, Junior or Sis can design a suds-snow picture over it to provide an eye-catching decoration . . . and an attractive gift for any member of the family.

No matter which of these refreshing soap-suds decorations you use, remember to let it dry for 24 hours. It will remain bright as frost in the moonlight for a Christmas-New Year's decoration that brings cheer to your holiday guests. ■

St. Catharines refunds deposits

FRED CAVERS, chairman of St. Catharines P.U.C. (seated), and Ron Taylor, office manager, had a busy time recently when the utility refunded a total of \$22,000, representing deposits made by 2,100 customers for utility service since 1945. By charging a flat \$5 for each residential move, the St. Catharines



Commission is aiming to streamline office procedure. Only the first occupant of a new house and industrial and commercial customers will be charged on a \$5 per kilowatt demand basis.

JOHN McGREGOR

(Continued from page 27)

one for each year of her husband's service with Toronto Hydro.

Mr. McGregor, obviously moved by these compliments, recalled that, he came to know every employee personally — "almost all by their first names" — during a long period of service as paymaster of the Toronto system.

"Now that the time has come to retire from the system, I hope I can continue these friendships."

There was warm applause as Vice-Chairman John McMechan introduced Harry Hyde, who has succeeded Mr. McGregor as General Manager. Mr. Hyde joined Toronto Hydro in 1926 after grad-

uation from the University of Toronto as an electrical engineer. During World War II he served for four and one-half years with the Royal Canadian Engineers.

In 1951, the new general manager was appointed Engineer, Distribution, Planning and Design and Assistant Chief Engineer in 1952. He became Assistant Manager in 1957 and Assistant General Manager and Chief Engineer in 1958.

Mr. McMechan also introduced three new appointees: McDonald White, assistant general manager; Bruce Prentice, assistant to general manager—engineering, and Jack C. Ramsay, assistant to general manager — administration and secretary. ■

"MORT" ROGERS

(Continued from page 9)

ated address by A.M.E.U. Past President J. A. Williamson, Niagara Falls, and cuff links bearing the A.M.E.U. insignia, by R. S. Reynolds, Chatham, both of whom paid warm tribute to Mr. Rogers' distinguished service as president in 1951 and his subsequent contribution as a member of the Association's President's Counsel.

In acknowledging the honors conferred on him, Mr. Rogers characteristically paid tribute to members of the Carleton Place Commission during his tenure as manager. He singled out for special mention, W. J. Hughes, utility chairman when he joined the staff and G. E. Findlay, a prominent O.M.E.A. figure for many years. As a conclusion to his humorous reply, Mr. Rogers solemnly described it as "a highlight of my life." ■

Lindsay names new commissioner

Lindsay Town Council recently appointed Hilton Brown, local men's wear merchant, to the Lindsay Hydro-Electric Commission. He succeeds Reginald Cozens, who resigned from the commission recently to accept a new teaching position at Delhi, Ont. J. G. Baldwin has succeeded Mr. Cozens as Chairman of the Lindsay Commission.

GENERAL MANAGER

(Continued from page 8)

responsibilities with Ontario Hydro, he has worked tirelessly to maintain and enhance the unique relationship with the municipal commissions, which is the very essence of the Hydro enterprise," Mr. Duncan said.

Born at Niagara Falls, Ont., he was educated there and the University of Michigan, graduating with the degree of Bachelor of Science in 1921 after two years' wartime service.

Upon graduation, Mr. Manby spent a year with Hydro's Construction Department during the building of the Sir Adam Beck-Niagara Generating Station No. 1, once the world's largest hydro-electric development. From 1922 to 1938, he held several key operating posts with the Commission until his appointment as Assistant to the Chief Engineer in 1941. Mr. Manby was appointed Assistant General Manager — Administration in 1947.

In 1950, the Commission's stores centre and transformer station at Islington were re-designated as the A. W. Manby Service Centre and Transformer Station in recognition of his contribution to Ontario Hydro.)

The retiring General Manager is a member of the Association of Professional Engineers of Ontario; the American Institute of Electrical Engineers; The Engineering Institute of Canada; the Board of Trade of Metropolitan Toronto, and the Electric Club of Toronto. ■

Amherstburg sets 100 amperes as minimum capacity

Increasing use of electrical appliances and equipment has necessitated introduction of an Amherstburg P.U.C. regulation setting 100 amperes as the minimum capacity of all new residential electrical services. In recommending the change, Manager F. A. Bridle pointed out that an increasing number of Ontario municipal utilities are instituting this regulation.

LET'S CHAT

(Continued from page 29)

to serve to guests who drop in during the evening.

Spritz Cookies

- 1 cup butter
- ¾ cup sugar
- 3 egg yolks
- 10 almonds, chopped very fine
- ¼ teaspoon almond extract
- 2½ cups sifted flour

Cream butter and sugar. Blend in egg yolks, almonds and flavoring. Add flour and mix. Using various patterns in cookie press, put dough through press. Bake on ungreased cookie sheet 8-10 minutes at 400°. Decorate as desired.

Chocolate Meringues

- 2 egg whites
- ¼ teaspoon salt
- ¼ teaspoon vanilla
- 1 cup sifted confectioners' sugar
- 2 cups corn flakes
- 1 cup shredded cocoanut
- 1 6-ounce package chocolate bits

Beat egg whites, salt and vanilla until soft peaks form. Gradually add confectioners' sugar, beating until peaks are stiff. Fold in corn flakes, cocoanut and 2/3 cup chocolate bits. Drop by teaspoon to greased cookie sheet. Top each meringue with a few chocolate bits. Bake at 300° for 20 minutes. Cool slightly before removing from sheet.

Yield 2 dozen.

Noel Egnog

- 8 eggs
- 1 cup sugar
- ½ teaspoon salt
- 2 quarts milk
- 1 cup whipping cream
- 1 teaspoon vanilla
- nutmeg

In large bowl of electric mixer, beat eggs well. Add sugar and salt and blend. Add milk and mix thoroughly. To serve, top with mounds of vanilla-flavoured whipped cream and a sprinkle of nutmeg.

"A Merry Christmas to All! ■

THOSE WELCOME LIGHTS

(Continued from page 7)

a lack of unity in your setting.

Usually, diffused light over the entire area will solve the problem. Unity also can be obtained with strings of lamps to form linear paths of light. Perhaps a combination of the two.

Sometimes, there are features of a home which should be subdued. Perhaps a multi-windowed wall. Arrange your spotlights so they don't illuminate that area. And watch out for glare, sharp unwanted contrasts and ominous shadows. Once eliminated, your pleasant picture is complete.

Artistic outdoor lighting is the newest way to make every holiday guest — Santa included — feel more welcome than ever! ■

HOW DO WE PROMOTE?

(Continued from page 15)

nize that many customers haven't proper servicing facilities available to them in their municipality.

Here is an area where we cannot only place a "kilowatt-hour user" back on our lines, but also make a friend of our customer by an efficient repair job at a reasonable cost.

Let us never forget the customer's position — if he cannot obtain service on a certain make of car, he will buy another make. If he can't secure service on electrical appliances, he will buy gas appliances if available for his requirements. The gas companies are offering their customers high grade service at low cost. We must do likewise. ■

(To be continued)

Uxbridge staff attains safety record

Employees of Ontario Hydro's Uxbridge Area recently completed 1,000 consecutive days without a lost-time injury. This distinguished record was recognized when the employees were guests at a banquet in their honor.

JANUARY

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FEBRUARY

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APRIL

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MAY

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JULY

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AUGUST

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SEPTEMBER

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NOVEMBER

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DECEMBER

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Associations Name Officers	April
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Academy of Lighting Arts (Lively Lumens Dispensers)	May
Alouette, The Jaunty	June
Abitibi G. S. (Fifth Unit)	June
A Farmer in Hot Water — And He's Happy	September
Ajax Public Speaking Contest (Foto-News)	September
Announce CANDU Site	October
Aquatic Antics	October
Along the Abitibi (Otter Rapids)	October

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Britannia, H.M.Y. (Fit for a Queen)	June
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Bright Idea (Yonge Street, Toronto Lights)	July-August
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Detweiler, Mrs. D. B. (Obituary)	May
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Putting Power in the Picture	March
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Joseph Taylor Honored	March
Safety Record (Eastern Region)	June
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Final Turbine (St. Lawrence P.P.)	June
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Windsor Wins	July-August
Honorary Degree	July-August
Tangible Tokens	July-August
Honored	July-August
Life Saving Reward	July-August
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Grand Valley Group	July-August
Northern Conclave	July-August
Largest Yet	September
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Portable Power	November
Tea Up	November
In Brighter Africa	November

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End of a Cycle	July-August
Finis for FS	July-August

G Gordon, D. J. (Appointment)	January
Grant, Dr. Donald (Appointment)	January
Green, Lt.-Col. W. J., St. Thomas (Obituary)	January
Gibb, Sir Claude (Obituary)	February
Georgina Turns on the Power	March
Gibson's Scribe Wins Award	March
Gibbie, W. H., Oshawa (Looking Back at '58)	April
Grandfield, N. A., Brantford (Looking Back at '58)	April
Gardening Graduates (Niagara Parks School of Gardening)	June
Gordon, D. J. (Appointment)	June
Graff, H. R. (Consumer Service Eng. - Niagara)	June
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H Highlights of 1958	January
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Hyde, Harry (Propose National Association)	April
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Hustler, Harry (Election)	July-August
Hanna, R. B. (50-year Jewel)	July-August
High Voltage History	September
How Did Your Pet Expression Start?	November
Hayman, Douglas (Wins Canadian Legion Contest)	November
How Do We Promote?	December
Hyde, Harry, Toronto (Appointment)	December

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Appointment	December

HEARN, RICHARD L. GENERATING STATION

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Largest Yet	September

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Named Electrical Man of the Year	March
Notable Event (Foto News)	June

HYDRO — GENERAL

A Standing Challenge	January
Ontario Hydro Merit Award	March
Steadfast Partnership (J. S. Duncan)	April

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The Jaunty Alouette	June
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I It's Here to Stay (Electric Home Heating)	February
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In the Driver's Seat (Sales Promotion)	June

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Building Public Confidence	March
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Caution or Chaos?	February
The Meanest Thief	May

K Kemp, Alex - London (E.S.L. Appointment)	May
Kennedy, Robert (Appointment)	June
Kewin, George (Obituary)	June
Killough, W. J. (Appointment)	July-August
Kent's All-Electric Dream Home	July-August

L LaForce, Philip (Wins Hydro Award)	March
Looking Back at '58 (O.M.E.A. - A.M.E.U.)	April
Looking Ahead (J. S. Duncan)	April
Locke, P. R. — St. Thomas (Looking Back at '58)	April
Lively Lumens Dispensers (Academy of Lighting Arts)	May
Logan, Ross — Toronto (Obituary)	May
Loucks, Robert (Appointment)	June
London P.U.C. — New Office	June
Lake, N. J. (Merit Award — Foto News)	July-August
Luney, O. S. (Retirement — From the Province's Four Corners)	July-August
Looking at Coldwater (Extra-High-Voltage Project)	September

LAKEVIEW GENERATING STATION

Changing Pattern	July-August
From War to Peace (Mock-up Control Room)	July-August
From Pebbles to Boulders	September

LIGHTING

Making Light Work	September
The Light Treatment	October
Those Welcome Lights	December

LET'S CHAT

Electric Dryers	January
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Refrigerators	February
Electrical Appliances	March
Spring Cleaning	May
Electrical Gifts for the Bride	June
Electrical Washers	October
Gold Medallion Homes	November
Christmas Recipes	December

Morgan, Claire (Georgina Turns on the Power)	March
McNeice, E. S. — Port Credit (Obituary)	March
Meanest Thief, The (Editorial)	May
Magic Power, The (National Home Show)	May
Macaulay, Hon. R. W. (Named Minister of Energy)	June
Monarch of all it Surveys (Tellurometer)	September
Making Light Work (Lighting)	September
Master Station (System Control Centre)	October

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First Bronze Medallion Subdivision	January
Blossom Gardens (Electric Heating on Parade)	May
Western Ontario's First	May
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Leamington Manager Practices What he Preaches	November

MUNICIPAL

Wallaceburg's Big Day	January
Ontario's Iron Capital (Atikokan)	February
New Office for London	June
Trafalgar P.U.C. (Designed for Tomorrow)	July-August
Port Colborne Drives a Good Bargain	July-August

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MUNICIPAL HYDRO-ELECTRIC PENSION PLAN

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McKenzie, R. M. - Burlington (Retirement)	March
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MacDonald, J. B. (Named Rate Study Engineer)	May
McHenry, Gordon (Sales Organization Expands)	June
McMillan, W. H. (Appointment)	June
MacIntosh, Charles (Appointment)	July-August
McGhie, Charles (Presentation - Foto News)	July-August
McMann, Claude - Sarnia (Obituary)	October
McGregor, John - Toronto Hydro (Retirement)	December

Net Profits (Fishing Industry)	January
National Safety Council (Safety Awards)	April
National Home Show (The Magic Power)	May
Niagara Parks School of Gardening (Gardening Graduates)	June
New Office for London	June
New Canadian Enterprise	October
Named for a Veteran (Napanee Substation - C. A. Walters)	October
Niagara Falls (More Light)	October

NATIONAL ELECTRICAL WEEK

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Building Public Confidence	March

NUCLEAR

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Atoms on the Campus	May
New Canadian Reactors	May
Changing Pattern	July-August
Nuclear Power Moves Ahead	July-August

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Go North, Young Man	November
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O Outdoor Look, The (Transformer Stations)	January
Ontario's Iron Capital (Atikokan)	February
Origin of Names (How Did You Get Your Name)	February
On The Firing Line (J. S. Duncan)	April
On The Distaff Side	April

OTTER RAPIDS GENERATING STATION

Highlights of 1958	January
Along the Abitibi	October

ONTARIO

Ontario Public Speaking Contest (Talking Talents)	May
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OFFICE ADMINISTRATION

Looking Back at '58	April
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OFF THE WIRES

Comment	April
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ONTARIO MUNICIPAL ELECTRIC ASSOCIATION

District 5 (Impressive Impact)	March
Power Partners	March
Changing Times	April
In Memoriam	April
Steadfast Partnership (J. S. Duncan)	April
A Tradition Maintained (J. S. Duncan)	April
On The Firing Line (J. S. Duncan)	April
A Toast To An Era (W. R. Strike)	April
Down Memory Lane	April
Convention Candidates	April
On The Distaff Side	April
Veterans Applauded	April
Associations Name Officers	April
Business Before Pleasure (District 5)	July-August
Northeastern Utilities Form O.M.E.A. Group	September

P Putting Power in the Picture	March
Pie Prizes	March
The Proof of the Pie	March
Propose National Public Utility Association	April
Prophets' Panel	April
Public Speaking Contest - Ontario (Talking Talents)	May
Palmer, Hedley (Appointment)	June
Pepper, Gary (Appointment)	June
Pile, Ronald (Appointment)	June
Plantpower Seminar (Foto News)	June
Pedersen, Alex (Appointment)	June
Patterson, Dr. R. A., Kemptville (Retirement)	June
Port Colborne Drives A Good Bargain	July-August
Port Weller Drydocks Ltd. (We're Ready)	September
Pedal Protection	September
Power Pioneer (John York, Ottawa)	October
Peterborough Promotional Plan	October
Presenting Hydro	November

PUBLIC RELATIONS

Looking Back at '58 (W. J. Wylie)	April
Expand Public Relations Program	July-August

POWER RESOURCES

Highlights of 1958	January
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POWER EXCHANGE

Highlights of '58	January
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POWER DEMANDS

Highlights of '58	January
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Q QUEEN ELIZABETH, H.M.

Royal Visitors	June
Fit for a Queen	June
Symbol of Unity	July-August

R Ross, David - Point Edward (Obituary)	January
River of Destiny (St. Lawrence Seaway)	February
Russell, O. S. (Looking Back at '58)	April
Royal Visitors	June
Ramsay, D. A., Western Region (Appointment)	June

Reed, Murray E., Windsor (Appointment) September
 Rogers, M. W., Carleton Place (A.M.E.U. Presentation) December

REGIONAL

Sales Organization Expands June
 Eastern Region (Safety Record - Foto News) June
 H. R. Graff (Niagara Region) June
 D. A. Ramsay (Western Region) June
 A. M. Pedersen (Eastern Region) June
 Expand Public Relations Program July-August
 New Toronto Region Office July-August
 Toronto Regional Supervising Accountant (R. J. Gray) September
 Service in the Field December

RATES

Nipigon-Blenheim Set Lower Rates June

RICHVIEW TRANSFORMER STATION

Master Station (System Control Centre) October

RED ROCK GENERATING STATION

Highlights of 1958 January
 Changing Pattern July-August
 Red Rock Resume December

RURAL

Highlights of 1958 January
 A Farmer in Hot Water September
 Three Generations (Foto News) September

S Standing Challenge, A January
 Senyshen, R., Kitchener (Appointment) January
 Storey, George, Stouffville (Retirement) February
 Steadfast Partnership (J. S. Duncan) April
 Silently It Serves a City (Electricity) May
 Sir Adam Started It (Demonstration Coach) May
 Scott, Thomas — Hamilton (E.S.L. Appointment) May
 Superstition, How did yours start? June
 Symbol of Unity (St. Lawrence Project) July-August
 Smart, R. J. (Appointment) July-August
 Stratford P.U.C. (Presentations — Foto News) July-August
 Safety Shoes (Pedal Protection) September
 Stratford Steps Out (New Building) September
 System Control Centre (Master Station) October
 Skin-diving (Aquatic Antics) October
 Scholarships, Ontario Hydro November
 Service in the Field December

STREET LIGHTING

Wallaceburg's Big Day January

SALES PROMOTION

Form Sales Promotion Department January
 On The Firing Line (J. S. Duncan) April
 In the Driver's Seat June
 Sales Symposium June
 Form Sales Promotion Division June
 Sales Organization Expands June
 Corn on the Cob (Toronto Hydro Demonstration) June
 Sarnia Hydro Names Promotion Representative September
 New Canadian Enterprise October
 Why We Must Promote November
 How Do We Promote? December

SILVER FALLS PROJECT

Silver Falls "On The Line" November

STRIKE, W. ROSS, Q.C.

Impressive Impact (O.M.E.A. District 5) March
 Toast to an Era April
 Veterans Applauded April
 Business Before Pleasure (District 5) July-August

SITZER, I. K.

Appointment June
 Business Before Pleasure (O.M.E.A. District 5) July-August

ST. LAWRENCE SEAWAY AND POWER PROJECT

River of Destiny February
 You Can't Beat the Dutch May
 Stealing the Scene May
 Royal Visitors June
 Final Turbine (Foto News) June
 Fraser Named Director June
 Symbol of Unity July-August

T Tradition Maintained in a New Form April
 Toast to An Era (W. R. Strike) April
 Talking Talents (Ontario Public Speaking Contest) May
 Turner, D. L. (A.P.E.O. Appointment) June
 Teckoe, J. E., Jr. (A.M.E.U. Honor — Foto News) June
 Toronto Staff Celebrates (Quarter-Century Club) June
 Trafalgar Township (New Building) July-August
 Tellurometer (Monarch of all it Surveys) September
 Turn About's Fair Play (Detroit Edison Visit) October
 Triple Seal of Quality (Electrical Excellence) October
 Thunder Bay Takes Shape November
 Those Welcome Lights December

TRANSMISSION LINES

Burst Balloon — Foto News July-August
 High Voltage History September

TRANSFORMER STATIONS

The Outdoor Look January
 Master Station October

TRIPLE SEAL OF QUALITY

Seal of Quality September
 Electrical Excellence October

THERMAL-ELECTRIC STATIONS

Highlights of 1958 January
 Changing Pattern July-August
 Thunder Bay Takes Shape November

TELEVISION

Putting Power in the Picture March

U URQUHART, DR. R. W. I.

Appointment January
 Honorary Degree July-August

V Valentine's Day (Cupid's Day) February
 Veterans Applauded April
 Vamplew, Leo (Appointment) July-August
 Vestervelt, Cletus (Presentation — Foto News) July-August

VOLTAGE

Highlights of 1958 January

W Wallaceburg's Big Day January
 Wi' Besom and Stane April
 Williamson, J. A. (Propose National Association) April
 Work Standards (Looking Back at '58) April
 Wylie, W. J. — Toronto (Looking Back at '58) April
 Widdifield, Ivan (Appointment) June
 Windsor Wins (Foto News) July-August
 We're Ready (Port Weller Drydocks Ltd.) September
 Walters, C. A., Napanee (Named for a Veteran) October
 Why We Must Promote November

WATER-HEATER PROGRAM

Leamington-Lindsay-Clinton Step up Programs June
 Seal of Quality September
 A Farmer in Hot Water September
 North Bay Initiates Water Heater Program September

X Y Z Young, R. E., Welland (Appointment) January
 You Can't Beat the Dutch May
 Yonge St., Toronto Lighting (Bright Idea) July-August
 York, John (Power Pioneer) October

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